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Referentiality in New Music as a vehicle for new meaning

A dissertation submitted in partial satisfaction of the

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by

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September 2017

Referentiality in New Music as a vehicle for new meaning

Federico Llach – Vita

September 2017

Education

2017 **Ph.D.** in Composition at University of California Santa Barbara (UCSB)
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Additional Certification: Certificate in College and University Training

2013 **M.A.** in Composition, University of California Santa Barbara

2009 **B.A.** in Composición, Universidad Nacional del Arte (UNA), Departamento de Artes Musicales y Sonoras "Carlos López Buchardo" (National University for the Arts, Department of Music and Sound Art "Carlos López Buchardo")

2003 Músico Profesional, at Escuela de Música Contemporánea (Contemporary Music School), at the time part of Berklee International Network

Professional Employment

2016 *Real-Time Digital Music Synthesis, Processing and Composition*, UCSB [TA]

2015 *Class Composition*, Department of Music, UCSB [IR]
Intermediate Composition, Department of Music, UCSB [IR] [IA]

2014 *Musicianship*, UCSB [TA] Instructor

2013 *Fundamentals of Music*, Department of Music, UCSB [TA] of Record

2012 *Fundamentals of Music*, Department of Music, UCSB [TA]

2010 *Orchestration*, Departamento de Artes Musicales, UNA [TA] [TA]

2010- *Music Theory*, Instituto Tecnológico de Música Contemporánea [IR] Teaching

2009 *Ear Training*, Instituto Tecnológico de Música Contemporánea [IR] Assistant

2011- Private instructor: double bass, cello, guitar, music theory, ear training, piano

2007 and composition.

Awards, Scholarships and Presentations (selection)

2017 Corwin Award (1st Prize Electroacoustic Work, 2nd Prize Chamber Work)

2017 New York Electroacoustic Music Festival

2016 Internationales Musikinstitut Darmstadt. Selection for the CD of the *historage* project.

2016 Paul Sacher Stiftung Scholarship. Research on Mauricio Kagel's "Tremens"

2016 Commission from Centro de Experimentación Teatro Colón, "El libro de los flasheos" (The book of trippin') for string quartet, video, electronics & narrator. "Antidiaspora" project.

2016 Humanities and Social Sciences Grant, UCSB, for research on Mauricio Kagel's "Tremens"

2016 Cultural & Enrichment Grant, UCSB. For first-ever Summer Music Festival. Director, composer.

2016 Avaloch Farm Residency with Now Hear Ensemble

2016 California Electronic Music Exchange (CEMEC) at UCSD, Stanford and UCSB

2016 Selection for CREATE's Allosphere Research Facility's 52 channel speaker system concert

2015 Albert and Elaine Borchard Foundation Grant for Dissertation Research
Facilitated 20+ meetings and interviews with selected composers and researchers in Europe.

2015 Selected for REDCAT Studio Summer 2015

2015 UCIRA Co-sponsorship Grant. Facilitated Anders Lind's residency with Now Hear Ensemble

2014 Selection by specialized new music magazine *I care if you listen* for Fall mixtape 2014

2014 Selection for CalArts Digital Expo

2013 Corwin Award 1st Prize Composition Winner for Electronic / Electroacoustic Work

2013 Selected for REDCAT Studio Spring 2013

2012 Corwin Award 1st Prize Composition Winner for Orchestral Work and 1st Prize for Chamber Work

2011 Fondo Nacional de las Artes (Argentina) Scholarship (2011)

2011 La Prensa" Newspaper, Critic's Pick Award: Best Premiere of the year 2010

2009 Guillermo Graetzer Composition Award, SADAIC (Sociedad Argentina de Autores y Compositores), with "Talampaya" for orchestra (2008), premiered by the National Symphony Orchestra, September 24th 2010

2009 Melos/Gandini Study Scholarship with Gerardo Gandini, Marcelo Delgado and Compañía Oblicua (2009)

2007 Berklee College of Music Scholarship

Fields of Study

Music composition and computer music with Clarence Barlow, Curtis Roads and Joel Feigin.

Research interests: new music // digital revolution // embodiment and gesture in music-making // harmony beyond tonal and atonal // hip-hop // analog synthesis // Mauricio Kagel // spectral analysis for compositional purposes // jazz // new conceptualism // microtonal harmony // sensors and musical interfaces // music for media

Abstract

Referentiality in New Music as a vehicle for new meaning

Federico Llach

This paper explores referentiality as a way to overcome the excessive *inward focus* of New Music compositional thought. My reflections are placed in relation to abstraction and representation as a basic opposition that has operated throughout music history. In Part 1, I argue that not only “real world sounds”, but borrowed music as well, can be used to articulate musical discourses that belong to the realm of representation, and I illustrate the sampling and sequencing techniques that have allowed me to achieve such goal. In Part 2, I demonstrate that any concert is a visual spectacle in itself and I explore how both the performer’s physicality and the concert space can be expanded by technological means to articulate audiovisual narratives that are connected with aspects of our contemporary society. In Part 3, I illustrate how the concepts exposed in the first two parts informed my compositional process in “El libro de los flasheos (The Book of Trippin’)”.

Table of contents

Opening remarks: referentiality and relational music

In this paper I argue that a significant portion of New Music thought and compositional praxis has excessively *focused inward* as a source of inspiration. As a solution to this problem I suggest *referentiality* as a strategy for the generation of new musical meaning. By creating musical spaces in which sounds that are idiosyncratic to New Music coexist with sounds and musical morphologies associated with other musical experiences, both sounds become *referential*. Within the several methods that can be adopted to achieve the goal of *referentiality*, I explore the sampling technique and composition that is “not for the ears alone” by including theatrical aspects and digital media.

Whenever the term *referentiality* is used in this paper it will be addressing the ability of a musical discourse to take distance from itself to articulate critique, irony or affirmation by alluding to other musics, the world, or even itself. The distinction between this latter type of referentiality, which I will call *self-reflection,* and the *inward focus* mentioned earlier, is that the former implies an awareness of a change in perspective which allows the music to reflect on itself. In other words, while *inward focus* is an immanent approach, *self-reflection* conceives new music as a alien context.

My discussion will comment on the changes set forth by the Digital Revolution and how this has triggered changes in society and in music-making. Digital Signal Processing techniques and the Internet have provoked substantial changes in the New Music apparatus: the former, by making affordable technologies that combine several media sources available to composers; the latter, by providing them with self-publishing mechanisms. Philosopher Harry

Lehman argues that both these factors have resulted in a loss of power of the Institutions that govern New Music. This less-regulated landscape has allowed for a change in compositional ideas, consisting of a shift of focus from the seek of novelty within the musical material (i.e., absolute music) to the seek of novelty in the relationship between the music and the ideas. This latter approach is what Lehman (2016) calls *relational music*: music with precise relationships with the world.

Composer Matthew Shlomowitz both acknowledges the ideas of and takes distance from Lehman, who emphasizes the use of text and images as indispensable elements in Relational Music. Shlomowitz (2014) argues that extra musical elements are not a *necessary requirement* of relational music, which can also be achieved by sound itself. In Shlomowitz' view, critical thinking in contemporary music is often applied to sounds and ideas from New Music's postwar tradition, which he finds "a bit limited and a bit insular" (2010): this what I have called the *inward focus* of New Music. His widespread practice of using "real-world" samples (e.g: a drumbeat, war sounds, train announcements, ping-pong sounds and a slurp in his piece *Popular Contexts*) results from the application of critical thinking to a previously neglected *corpus* of sounds.

The element missing in this discussion is how the use of audio samples of *borrowed* material can be used to generate a type of discourse that is *outward focused*, i.e., that draws relationships to the world. Indeed, texts, videos, and ordinary sounds are undeniably part of our contemporary world, but so is music that doesn't belong to the circles New Music—actually even more so that New Music itself! In my compositions, I have utilised video, text *and* borrowed material to articulate musical discourses in which *sound semantics* have a prominent role. I do not use borrowed material to achieve a traditional discourse

structured as a mere *crossover*, but I rather develop a general aesthetic which is based on *referencing* undeniable elements of the contemporary cultural landscape. My underlying motivation is to create a narrative by establishing relationships between musical morphologies and sounds that are imbued with semantic component; my technique is the *reference.*

Moreover, although this introductory paragraphs have centered around the ability of music to relate to the world semantically, it is not my goal to create art that exclusively focus on the *ideas*—as is the case with the visual arts avant-garde in the early XXth century or the recent emergence of New Conceptualism in music—but to create music that can be experienced aesthetically as well. In other words, as Shlomowitz has noted, if relational music is on the side of *representation* in the old “abstraction vs. representation” debate—a debate that included Prima vs. Seconda Pratica and Absolute vs. Program music—I am interested in moving organically between these two compositional forces, and I will explore in this paper the techniques I have used to achieve this goal.

There are two reasons the title of this paper contains the term *referentiality* instead of *relational music*. The first is anecdotal: my Phd Concert was tilted “Referential”, in honor to a short story of the same name by american writer Lorrie Moore (2012), whose recorded narration of the story I used on one piece in the program. On the other hand, I think the term *referential* better emphasizes the notion of context, an important element in my compositional praxis. Ultimately, a possible reduced meaning of the term *referential* could be the specific procedure of relating music to the world by using borrowed material. However, in

this paper, I will use the term in its expansive meaning, and only use the term *relational music* when specifically referring to the debate initiated by Lehman et al.

While discussing sampling in Part 1, I will offer parallels between the use of sampler instruments and techniques found in composition for acoustic instruments. Through drawing these parallels, I hope to distill some shared concepts that underlie both approaches. In Part 2, my goal will be to identify strategies that lead to successful integration of musical and extra-musical elements. For this, I will start by examining the physicality and gestuality of musician performers as a parameters for composition, followed by its technological *expansions* into virtual and hybrid bodies and spaces.

While I will use examples of several of my works throughout the document, the most conclusive examples of the concepts exposed above will come from “El libro de los Flasheos (The Book of Trippin’)”, discussed in Part 3, in which the cultural connotations of borrowed music are key in developing a *semantic* narrative. *Referentiality* is present both in the musical and extra-musical layers in order to depict New Music as a myth which, in spite of being incalculably rich in its intrinsic qualities, must be re-formulated in order to re-invent itself.

Part 1: The use of samplers for composition

Because sampler instruments are empty buckets that can be filled with any sound, sampling is a particularly well-suited technique for achieving referentiality in music. In the following pages, I define the sampling technique, give a historical overview, explore musical sequencing and explain the types of sound processing that I have used more extensively. This is followed by an investigation of three possible approaches to using samplers for composition.

My goal is to illustrate how the use of certain simple sampling techniques allow me to deal with the use of referentiality in composition and to organically shift to abstraction. These techniques are:

a. Creation and transformation of sequences in a way that allow for manipulation of expectation, especially when using narrative texts. In other words, how can recognizable samples claim the ability of manipulation of expectation—a key aspect of Western Music compositional thought—at a similar level of complexity than abstract instrumental and electronic composition can.

b. The liberal use of looping properties of samplers in order to move with flexibility between the macro-scale, which, based on the recognizability of the source sounds allows for *referentiality*, and the micro-scale, with synthesis-like acoustical traits. In other words, how this technique allows to organically move between *representation* and *abstraction*.

I. Sampling

The sampling technique consists of arbitrarily selecting several portions of sound and storing them on any media for later reproduction. Each selected portion is called a *sample,*[1] while the device that allows for real-time playback of the samples is known as a *sampler instrument*, or just a *sampler*. The source material can be self-generated by any means (by performing on an instrument or object of any kind), found in the urban or natural environment (as is the case with field recordings) or borrowed (by using recordings of music made by others).

Once the samples are loaded into the sampler instrument, the real-time performance of disparate sounds is made possible. The performance *sequence* (i.e. which sounds are triggered at precise times) can be stored independently of the actual samples. As is the case with conventional composition, the craft of composing with samplers requires the development of the right sensibility for a) choosing sounds and b) articulating those sounds in time; i.e. composing the *sequence*.

Musique concrète and hip-hop

The concept of sampling as a procedure for composition can be traced to the well-known experimental compositions of pioneer Pierre Schaffer, which consisted of sound collages featuring the natural environment, the human voice, and recordings of musical instruments. Even when Shaffer's early attempts did not include sampling techniques, as they consisted of elaborate setups for on-the-fly compositions that included gramophones, radios, and other

[1] Note that the word *sample* is also used to refer to each of discrete numbers into which audio signals are converted during the process of digital recording.

sound sources, they are nonetheless exemplary of the concept of using *borrowed material* as a procedure for music-making, a revolutionary approach that eventually found its way into works that were recorded onto tape. Schaffer was interested in what he named *reduced listening*—a type of listening that focuses on the traits of sound itself regardless of its semantics or its cause. His commitment with this concept made him take distance from composer Luc Ferrari, originally colleague of his in the collective Groupe de Recherches Musicales (GRM), as Ferrari made more emphasis on sound source recognition and identity through the composition of soundscapes. From a historical perspective, it seems to me as if Schaffer needed to make the reduced listening claim so as to give more hierarchy to his practice, by giving his *concrète* sounds the right to belong to the more prestigious realm of absolute music. Relational music now makes the opposite claim, by re-attaching sound and meaning in purposeful ways.

My personal contact with sampling, however, came during my teenage years. For instance, in the composition "Hotwax," part of *Odelay* (1996), a landmark album for my generation, anti-folk composer and singer Beck, in collaboration with the Dust Brothers—a producer duo with "encyclopedic knowledge of music" whose "cut and paste style continues to push the boundaries of music" (Dust Brothers, 2017)—, layered a keyboard phrase from influential funk drummer Pretty Purdie's track "Song for Aretha" with the drum break of "Behind the Wall of Sleep" by English rock band Black Sabbath.

Endeavors of this nature have roots in the hip-hop movement, a cultural revolution which happened during the devastation of the Bronx in the mid-1970s leading to an unprecedented socioeconomic situation. In its early days, hip-hop was performed at house parties using the technique pioneered by DJ Kool Herc, in which two turntables loaded with copies of the

same record were used to generate looping drum beats. On top of these beats, the party's Master of Ceremonies (MC or Emcee) would add rhythmic lyrics, thus becoming a live performance-oriented musical practice—like musique concrète was in its beginnings.

In program notes for my recent works, "El libro de los flasheos (The Book of Trippin')" and "Compositionally, I always wanted to be like Fred Astaire,*"* I highlighted the importance that hip-hop has had for me as a double source of inspiration. On the one hand, my use of the sampling technique is evidence of this inspiration. On the other hand, I have been moved by the genre's strong ties to social and human-right protests of the Black community. Hence, I am not primarily attracted to the material of hip-hop (although I am, on a second level) but to its ability to create music by the use of borrowed material.

Hip-hop has a greater influence on me in comparison to musique concrete as it places a greater emphasis on recontextualization. However, while hip-hop utilizes bits of alien material as elementary building blocks for the articulation of musical forms and, in most cases, doesn't strive for *referentiality*, I repeatedly expose *hybridizations* without exploring them in depth or attempting to generate a *crossover aesthetic*, but with the goal to make *referentiality* the underlying strategy of a conceptual narrative. For instance, in "El libro de los flasheos", Dave Cox's beatbox sounds serve as the rhythmic section for string quartet harmonies extracted from Tom Johnson's "Chord Catalogue", a narrator text is manipulated to achieve a vocoder-like sound culminating in a sweeping filter typical of electronica, a manipulated John Coltrane solo is accompanied by pitched-up samples of a string quartet by Helmut Lachenmann, and so forth.

In the realm of New Music, we are in the midst of what could arguably be called a third golden age of sampling—if musique concrete was its first and the emergence of hip-hop and electronica the second. Many composers, including myself, are working with sampling—Matthew Shlomowitz, Natacha Diels and Alex Temple amongst a myriad of them—with a special emphasis in the *meaning* of the sound, i.e., sound not as an isolated object for aural appreciation but as an object that is imbued with narratives and cultural connotations. In my own music, I have specifically favored vocal samples and samples of borrowed music. I found vocal samples are suited to a particular type of expectation manipulation (which I explain in the next section) and, in “El libro de los flasheos”, I have made use of varied music samples to elaborate a critique on the state of New Music and to propose solutions.

Sequencing

Through musical practice, research, and reflection, I have found several meaningful approaches to using samplers for composition, which I will discuss by first considering aspects of *sequencing*. To do this, I will illustrate with examples using *unaltered sounds* (i.e. sounds that reference the source material *as is* and that are repeated identically each time they occur in a given piece), because once unaltered sounds have been chosen, the creative focus shifts exclusively to the composition of the *sequence*. This discussion will be followed by an examination of *processed sounds*—those on which the source material is modified by parameters of a sampler instrument and/or whose sound qualities change each time they occur in a given piece.

While the *Letter Pieces* series by Matthew Shlomowitz do not necessarily employ a sequencing device, they nevertheless are relevant examples that show why sequencing can

be considered a rich compositional device in itself. The title of the series alludes to the fact that the score consists of nothing else but letters of the alphabet (A, B, C, and so forth). Within certain limitations, the performers are free to choose sounds, as well as physical gestures (see pages 34-35), that correspond to each one of the letters. As the composer states, “To put it simply, I’ve created the structure and the players create the content; two enactments of the same piece look and sound entirely different” (Shlomowitz, 2007).

Despite the flexibility that Shlomowitz grants to his performers, many of the disparate performances are effective. This success can lead us to argue that a well-composed sequence might be sufficient to articulate a musical work. Additionally, during substantially long chunks, the *Letter Pieces* revolve around only a handful of letters. This simplistic yet provoking strategy acts as a fresh reminder of the power that repetition and expectation have in musical discourse, even though these basic concepts occasionally seemed to have gone dormant in academic composition circles. Along these lines, I wrote the following program notes for my piece “Compositionally, I always wanted to be like Fred Astaire”:

> Because of being focused on the discovery of new sounds, much experimental music of the 1950-60’s lacked direction. Decades later, having dropped the taboos about elementary techniques—e.g. repetition—we benefit from the palette that becomes available. We make it our own and compose with greater morphological freedom. (Llach, 2016b)

My own explorations lead me to suggest that when working with simple sequences and unaltered sounds, it is possible to achieve elongation and compression of time in a way that allows for a unique manipulation of the sense of expectation.

In instrumental composition, time expansion and compression are achieved by multiplying or dividing all rhythmic values of a given melody by an arbitrary number, most often a multiple of two. Fourteenth and eighteenth century counterpoint are good examples, as is the music of Steve Reich. In electronic music, digital signal processing techniques have allowed for *time stretching* and *time compression* of digital recordings, which can respectively produce slower and faster versions of input source material without changing its pitch.

Both the instrumental and the electronic approaches offer the listener the experience of alterations in time but do not change the content of what is heard, regardless of whether that is a musical note played by an instrument or an audio file. On the contrary, if we change the speed or tempo (two equivalent terms in this context) of a given sequence of audio samples that are always played back at the same speed, not only will we have achieved a change in the duration of the sequence itself, we will have also have made *more* or *less* time available for the audio sample to play, thus changing the actual content of what the listener hears. In other words, if the rhythmic values of a *melody* are augmented, we hear the same melody at a slower speed; whereas if the rhythmic values of a *sequence* that triggers audio samples are augmented, we will hear *more* of the contents of each audio sample. The same is also true in reverse: we will hear *less* of the contents of each audio sample if the values are diminished, for example, if the sequence is sped up. This effect can be achieved by loading a sampler instrument with audio samples that are either obtained from disparate sources or that are in themselves slices of a larger audio file. In figures 1a and 1b this effect is depicted graphically and is contrasted to the aforementioned techniques of time manipulation. Time is represented on the horizontal axis only.

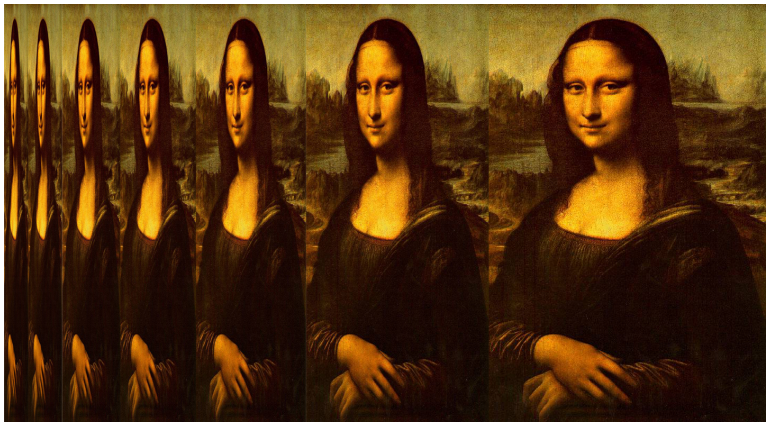


Figure 1a

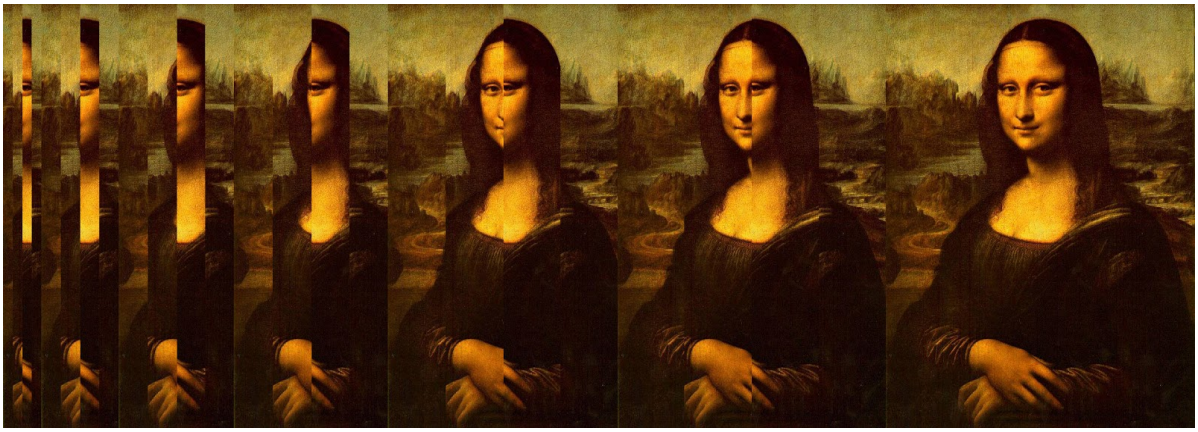


Figure 1b

In figure 1a, the individual steps of the sequence (or its equivalent, the musical note) are invisible, because of the type of time compression that is taking place. In figure 1b, a sequence of four steps can be easily recognized. The pattern can be identified at a glance in the second image because each slice always corresponds to a particular spot in the horizontal axis of the image. For instance, the third slice *always* corresponds to *La Gioconda*'s left eye. If we view this image as a metaphor for an audio sample sequence, the second image correlates with an audio sample split into four slices of equal length.

Although a sequence of audio samples naturally lends itself to this type of time compression and expansion, the same technique can also be carried out in instrumental composition. In

his work “DNA”, Mark Applebaum scans through different sections of a musical passage as a strategy to articulate the form of the work:

> Although the piece is seven minutes in duration, there are only two minutes of material to learn. These two minutes consist of a cyclic, 78-second “theme”—of which a different 53-second excerpt is heard on seven occasions—and six brief tuning codas. In each tuning coda, a particular string is tuned. (Applebaum, 2004)

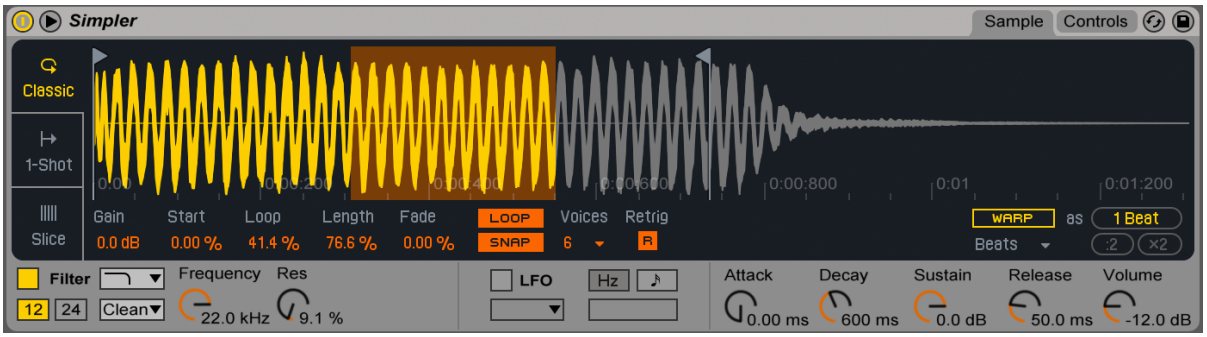
As a possible rewording of this compositional strategy, one could use a visual metaphor and say that the form consists of an exploration of an acoustic landscape by giving the listener glimpses of the material that are accessed through windows of varying position.

After experimenting with several types of source material, I observed that an increased sense of expectation is achieved if the acoustic landscape consists of narrative speech, as narrative has a greater implicit linearity than instrumental music. For the first incarnation of my work “Your piece here”, for any instrument and sampler, I used a sample of American writer Lorrie Moore reading one of her short stories, “Referential” (Moore, 2012). My compositional focus, like Shlomowitz’ when composing “Letter Pieces”, was given entirely to the composition of a *sequence*. Unlike Shlomowitz, I require that all the sounds filling the sequence be obtained by slicing one single audio sample for each of the two layers. The two layers consist of a well-known instrumental piece with which the performer feels comfortable and a speech sample of my choice. The familiarity the listener will likely have with the instrumental piece plus the linearity implicit in the narrative allow for a very precise manipulation of expectation—the most salient aspect articulating the musical form.

The key aspect in this type of sequence manipulation is that it provides with the possibility of manipulating expectation in *referential music* (if referential sounds are used to load the sampler instrument), a property of musical discourse which has been a cornerstone concern in *absolute music*.

Sound processing

In Mark Applebaum's "DNA", the re-tuning of the guitar strings acts as a subversive element that prevents the identical reproduction of the basic passage. In electronic music composition, several modifications can be applied to each of the samples that are loaded into a sampler instrument. In this spirit, when using sampler instruments to compose either fixed media pieces or the electronic component of instrument(s) plus electronics pieces, I have made extensive musical use of the *Start Time* parameter, which allows the user to trigger a sample starting at any point within its duration, as well as of *Loop Length* and *Loop Compress*, two parameters available in Ableton Live's Simpler instrument (a sampler instrument with simple controls) that allow the user to create small looping areas within a given sample.



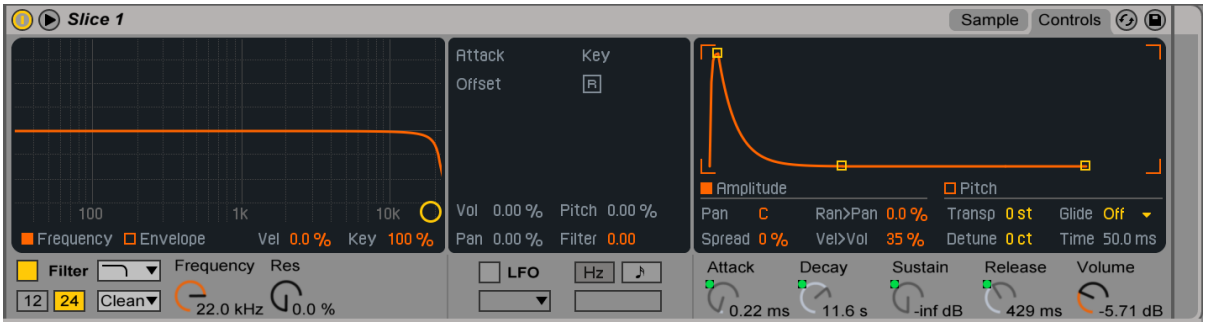


Figure 2. Ableton Simpler Instrument

My fixed media piece “This Time Around—REMIX” is based solely on the techniques explained above. Two MIDI sequences run throughout the piece, each triggering one sampler instrument loaded with identical slicings of an audio file which consists of a double bass take of a recording session of my piece, “This Time Around.” The sampler instruments are hard panned, and the sequences are identical, except one is stretched in the ratio 34:35 (see figure 3) in comparison to the other. While this complex relationship provides the macroform with a structural polyrhythm that gives rise to a slow-paced phasing effect, the manipulation of the session’s global tempo yields the type of time compression and expansion explained earlier. Additionally, changes in the *Start Time* and in the *Loop Length* offered me the possibility to change perspective: using a metaphor of space, they respectively allowed me to move “from left to right” and to “zoom in and out” respectively (see figure 4).

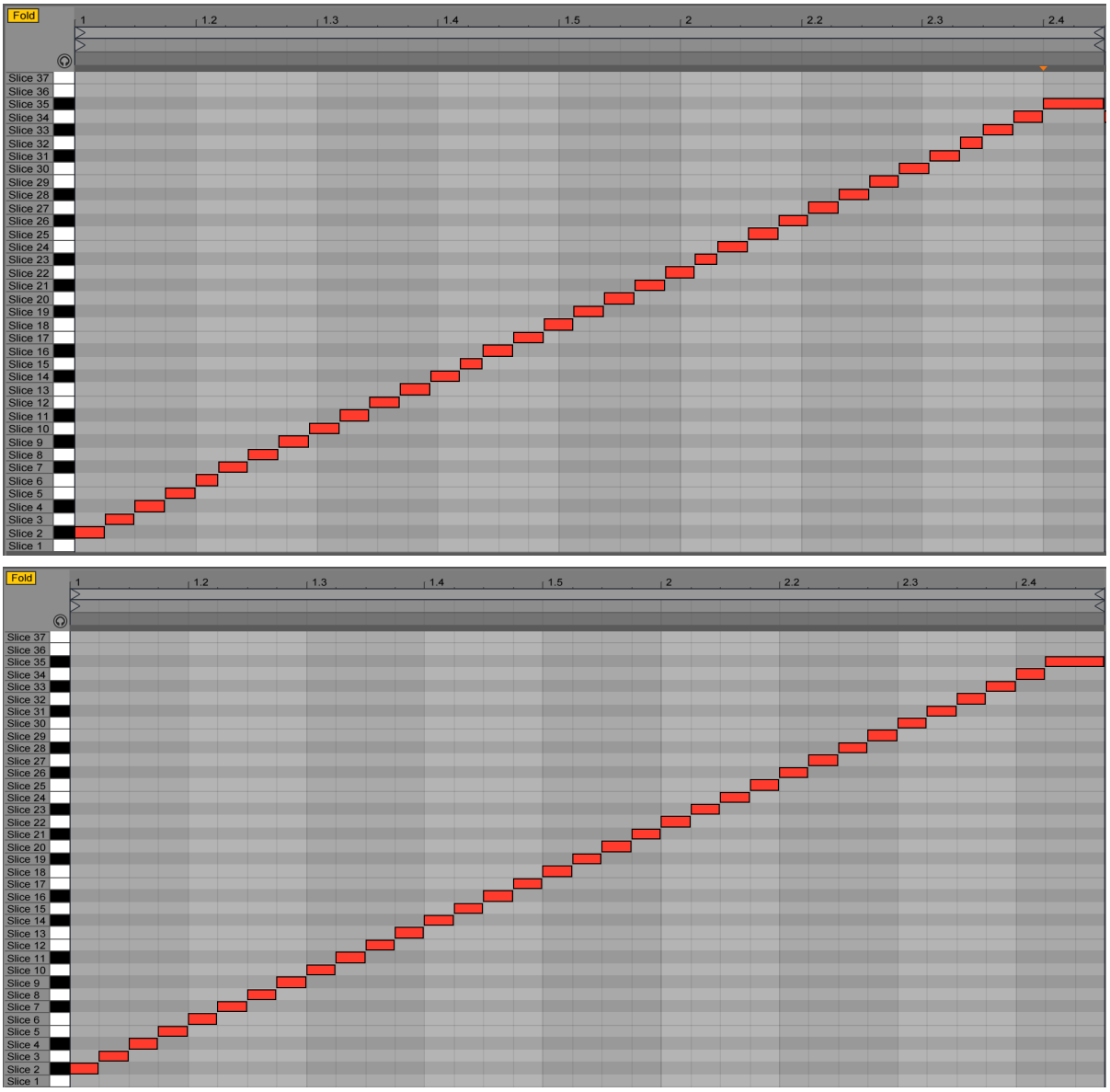


Figure 3. MIDI sequences of 34 and 35 steps.

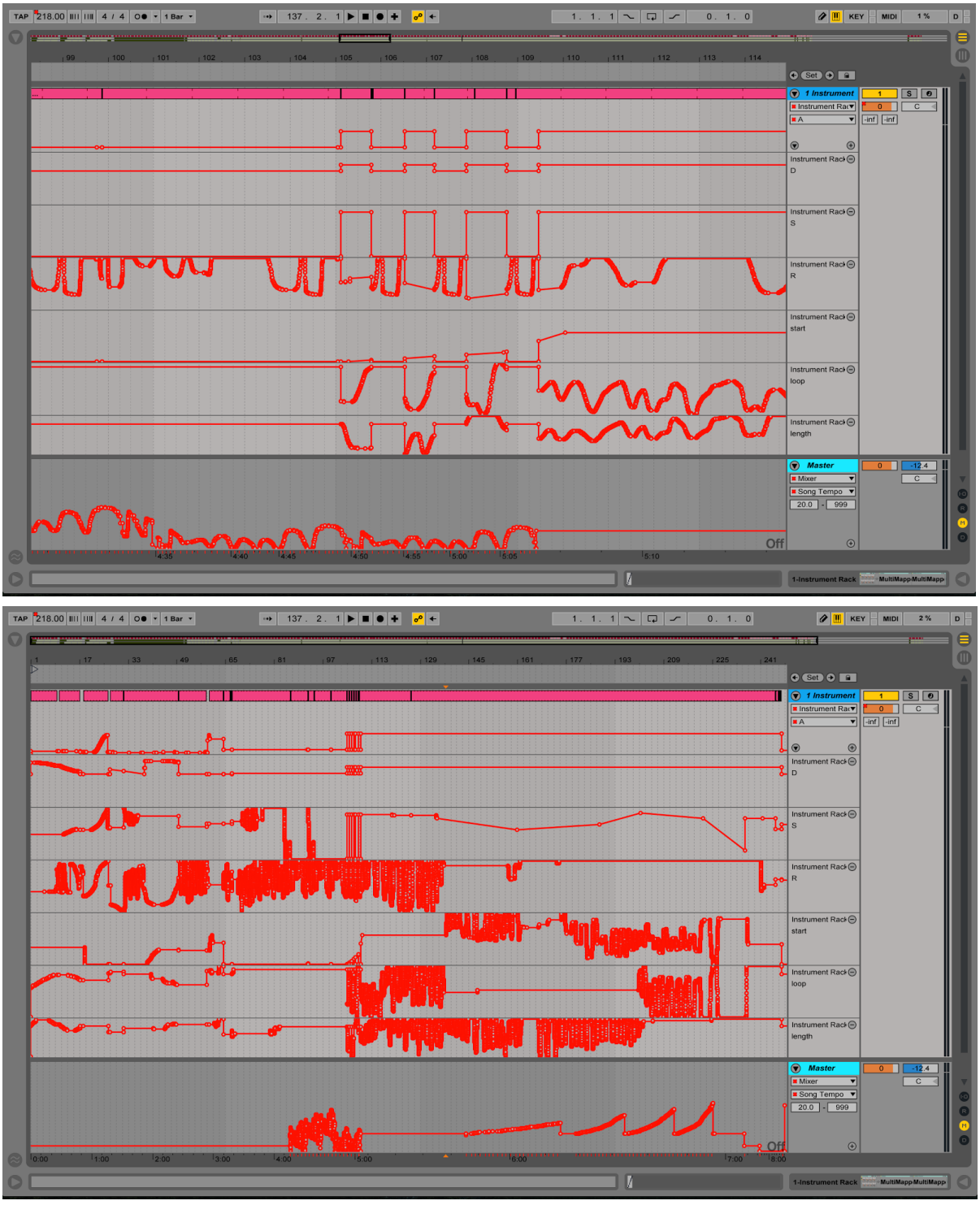


Figure 4. Manipulation of various parameters throughout the piece: A, D, S, R (attack, decay, sustain and release resectively), start (Start Time), loop (Loop Compress), length (Loop Length).

This successful experience led me to make use of the parameters *Start Time*, *Loop Length* and *Loop Compress* in several other works. My interest in these parameters lies in the fact that they facilitate exploration of the micro and macro scales of the source material, ranging from almost unaltered playback, which makes the source material recognizable, to fast-looping playback that delivers sounds akin to those obtained using granular synthesis, a technique pioneered by Curtis Roads that uses small audio particles to create new sounds.

The ability to move freely between these two worlds—as well as through a multiplicity of attractive sonorities between them—is a powerful asset, as it provides me with sounds that are disparate, yet closely related. In other words, it allows to move organically between *referential* music and *abstract* music.

II. Three approaches

The following are three ways in which I have used samplers to compose music for acoustic instruments or fixed media. The degree to which these techniques engage with *referentiality* is explored. These examples focus on technical possibilities rather than on the *semantic* concepts that have been discussed earlier. These latter, and their aesthetic implications, are addressed in the discussion about “El libro de los flasheos”, at the end of this paper.

a. Using borrowed material for later resynthesis

In Western art music, the term *spectral music* refers to any music that utilizes computerized methods to obtain information about the physical components of a given sound—such as its spectrum or overtone structure—for later use in the composition of music for acoustic instruments. The goal can either be to emulate or transform sounds by assigning individual overtones obtained from the analysis stage to instruments in an ensemble. Composer and saxophonist Steve Lehman, credited for having combined spectral music with jazz improvisation, asserts that the utmost achievement of the spectral movement has been the elision of timbre and harmony, by conceiving both of them as a composite of more elementary sounds. (Lehman, 2012)

I agree that spectral methods have indeed been a groundbreaking factor in the history of compositional techniques because they use audio as a tool to create compositions for acoustic instruments. However, in my own experience as a listener of music based in spectral models, I found myself wishing that these explorations happened with a more rhythmic imprint, as many times spectral composers favor slower tempi in order to achieve complex timbres. Additionally, I was inspired by the idea of incorporating the advancements

in the sense of expectation and time manipulation that can be obtained when stretching or compressing musical sequences in the fashion explained earlier (see pages 11-15). An early attempt to combine these two approaches was my custom software *SmartScore Generator* (see figure 5).

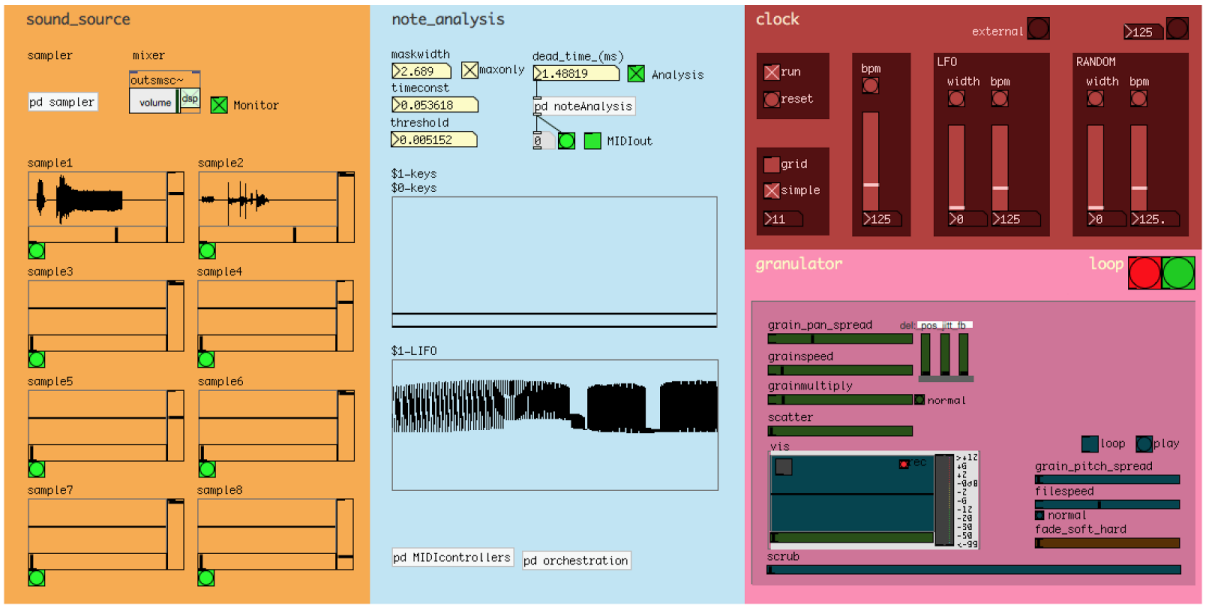


Figure 5. *The Smart Score Generator*'s main view

The Smart Score Generator allows the user to create and interact with sequences of up to 8 audio samples. The resulting stream of audio is analyzed in real-time and then output in the form of MIDI notes in up to 16 channels. Several parameters in the analysis stage, which was based on Pure Data abstractions created by Thomas Grill, allow the user to control the number of notes being produced. The rate of output notes can go all the way from a very fast and steady stream of notes—representing most of the characteristics of the original sound—to very few and sparse notes. Alternatively, the rhythm of the output can be executed in real-time by the user. The granulator on the lower right can be added at different instances of the signal chain but is not an essential part of the software.

The compositional result of this software was “As heard on the radio*”* for piano, violin, cello, flute and radio. The piece contrasts the orchestral resynthesis of the audio stream with the source audio stream itself, which consists of radio-like collages and is routed to the radio. I used the experience gained during this project for the composition of “El libro de los flasheos (The Book of Trippin’)” (see detailed explanation in Part 3), for which I used similar concepts yet different techniques.

In essence, the choice of audio samples here acts as a choice or *color* or *harmonic spectra*. Depending on the setting of various parameters, referentiality can be partially veiled by the system itself, whose output may be somewhat distant from the source material.

b. Using borrowed music as scratch material for composition

In his 2010 conference *“*Music with Music”, composer Johannes Kreidler made the following remark:

> In 2004 I sat on my computer and I programed a sound wave. But then it came to my mind that I already have in my computer 250Gb of sound waves. That’s the whole music history [...] in one box. So I asked myself: ‘Is it necessary to program any new sound wave when I do already have thousand of music in this box available?’ I think we are quoting a lot. This not only applies to single notes that are somehow the atoms of music, [...] but also to bigger combination of tones. There are some clichés in contemporary music. [...] It is better to quote intentionally. So, maybe you happen to need an orchestral noise field. I would say, take a page of Lachenmann and use it,

> instead of inventing the wheel again. I would call this open-source composing. (Kreidler, 2010)

Often, when a composer is asked to write a solo instrument piece, the composer and performer hold a meeting in which the composer asks the performer to play original or innovative tricks on their instrument, hoping to find new techniques that will make the piece stand out among others. Because this workflow has provided groundbreaking advancements in instrumental techniques in the past, it is sometimes assumed that this will always be the case. As hinted in my already quoted program notes to “Compositionally, I always wanted to be like Fred Astaire*”* (pages 11-12) and in line with Kreidler’s sentiment, it is now the time to think critically about what to do with the advancements in instrumental techniques achieved in the past, rather than to simply repeat them. The greater the awareness about the ownership of a given compositional technique, the greater the ability to re-contextualize them purposefully.

Composer Michael Beil also de-emphasizes the importance of *material* and suggests a focus on the *meaning* of a composition:

> For me, the *meanings* of a composition's musical material are more important today than the material itself; I can no longer consider material primarily a reservoir of building elements within an organized structure of sounds. In my view, its important properties for composition lie in the medial domain; this makes the material a means, not an end in itself. [...] Furthermore, the specific material composers choose to use and the structural contexts in which they place it are no longer decisive for the success of their music. (Beil, 2012)

The de-emphasis on material leads Beil to use foreign material and quotations, a practice which is in line with my reflections when discussing the use of sampled material. However, Beil appears to be interested in a type of cleansing of the quoted excerpts' connotations: he seeks material that can be "quickly recognized and quickly forgotten". In his view, this is the most effective way for the quotation to become a *carrier* of his *strategies*: "I am not concerned with the original meaning already inscribed in a quotation, nor its possible new meaning in an artificially produced context" (Beil, 2012).

While I share with Beil the sentiment of de-emphasizing material and structure, the content of quoted or borrowed passages is relevant to me—as is the generation of new contexts. The difference might be I don't conceive these created contexts as artificial, since I view the combination of disparate musical sources and visual narratives as a part of my essence as well as my artistic upbringing, like many others in my generation.

In late 2016, I was asked by Annegret Mayer-Lindenberger and Jonathan Morgan to write a piece for viola and electronics, which I named "Begin*"*. For this piece, I loaded an extensive sampler with fragments of all eight movements of *"*Viola Spaces,*"* a series of studies composed by world-class violist Garth Knox using "recurring techniques which can be studied, among these the so-called 'extended techniques*'* (usually meaning classical techniques taken a little further)" (Knox, entry posted on his website, date unknown). This sampler instrument, which I equipped with the ability of transposition and continuous glissando, allowed me to compose an audio sketch of the piece, which I later transcribed to conventional notation. My practice followed the principles discussed earlier (pages 11-15) of composing sequences with varying-length steps that allow for a shorter or longer glimpse of the source material. In this case, I used longer steps resulting in discernible quotation-like

passages only towards the end of the piece (as asserted by external informed observer Mariano Malamud (2017), violist and former student of Garth Knox).

Referentiality is implicit in this compositional approach. In “Begin”, sounds and musical morphologies that are idiosyncratic to New Music are explored and recontextualized, allowing for the articulation of musical discourses that deal ironically with *cliché* expressions.

c. Sampling a work in progress for use within the same piece

Transformation of material is a cornerstone concept in Western composition. While sonatas are the most archetypal example, other musical endeavors such as minimalism, jazz improvisation, and others, are based on the concept of transformation of material as well. More specifically, electronic music also draws on this broadly defined strategy.

My compositional sketches are often hosted in Digital Audio Workstation (DAW) projects. In order to benefit from the effectiveness that transformation of material gives to the articulation of form, I load sampler instruments with audio files consisting of my work in progress on a given piece in order to compose further sections of said work. I transform these samples namely by modifying their *Start Time*, *Loop Length* and *Loop Compress* parameters (pages 15-19), as well as by using several other digital signal processing techniques. In my earlier attempts—specifically in “El libro de los flasheos (The Book of Trippin’),” “Compositionally, I always wanted to be like Fred Astaire,*”* and “Begin*”*—I used this technique to compose the closing sections after the original sounds had been heard. In the punk-inspired duo for violin and viola plus electronics, “Dear Gross Man I Play Online Video Poker With,” however, I

subverted the conventional order by using the technique during the opening section of the work.

Self-referentiality at the piece-level can be achieved here, which allows for the elaboration of the same types of discourse mentioned above (critique, affirmation and irony), but at the piece level instead of at the *genre* level.

Part 2: Not for the ears alone

In this section of the paper I delve into concert-music works that include certain types of visual aspects: both theatrical actions executed by the performers as well as video-projections.[2] Concert works which include visuals present a problem to our discussion about *referentiality* since (with the exception of abstract visuals) they are *referential per se.* While when discussing sampling, the main motivation was to show how this technique enables referentiality, this single question is not sufficient in the context of the discussion of works that deal with the visible, which seem to inevitably inscribe the works in question on a different realm than the closed-eyes approach. What is relevant is how do these artistic experiences are able to articulate new meaning by creating new contexts for new music, as Matthew Shlomowitz noted on his portrait of Alexander Schubert:

> The remit of New Music has moved on and broadened out in the twenty-first century. Composers such as Joanna Bailie, Michael Beil, Johannes Kreidler and Jennifer Walshe have created work that: engages popular and everyday culture; develops historical ideas from the visual arts (e.g. conceptualism); utilises technology to create new musical instruments; combines field recordings with music to form new relationships between music and the world; and, establishes a music-led interdisciplinary practice with multimedia and theatricalised works. (Shlomowitz, 2015)

[2] Note that this excludes dance or other visual elements.

Does this mean that music with no visual component is not enough to articulate a valid discourse? I was asked this question by composer Julien Malausenna at Darmstadt Ferienkurse in 2016. While I believe that visual elements offer one possible solution to the problem of a *narrow-focused* approach to composition I described, it is one of many possible solutions. Composer Ashley Fure commented on the potential drawbacks of an endogamic creative community and on multiplicity as a necessary component of the solution, during her participation in the panel “New Conceptualism: a Dead End or a Way Out?” (2014):

> We treat our work as isolated aesthetic objects that construct and respond to their own terms. Because these terms are often context-specific and jargon-heavy, the vast majority of those outside our field have an extremely difficult time engaging with. [...] If we cannot express our aesthetic concerns a language that links beyond the esoteric boundaries that enclose us, we will remain an isolated and self-involved sub-group [...]. Is replacing sound with idea the only hope new music has of integrating into an expanded intellectual field? [...] The last we needed is a stylistic shift toward the land where “screeches are bad” and “youtube clips are good” and “string quartets are bad” and “MIDI realizations are good”. That very hurt mentality: the complacent huddling around our collective unspoken assumptions is exactly what got us into this mess in the first place. In order to survive as a creative ecosystem, we need different people doing different things, and with conviction. (Fure, 2014)

My investigation will proceed historically to show that a concert (any concert) is a visual spectacle in itself and will analyze the augmented interest by XXIst century New Music composers in using media to engage with issues related to our contemporary society, or to generate a discourse about new music; i.e. to elaborate *self-reflection.* Through this

exploration, I aim to unveil some strategies which support effective audiovisual discourses in the context of concert music by exploring the use of gestuality and bodily actions as parameters for composition, as well as the expansion of the conventional notions of concert space and performer's bodies into hybrid spaces and hybrid bodies by means of technology.

I. Towards the awareness of the relevance of physicality in music performances

Early historical considerations

Listening to music without seeing the intricacies of its performance is an almost everyday experience for us today. However, for the most part of what we conceive as Music History, instrumental performance was a necessary aspect of music consumption. It was hard, if not impossible, to conceive the consequences of a separation between what was seen and what was heard. Even when the performers were removed from the focus, as in the case of an orchestra performing from the pit during an opera, the physical proximity between the listener and the instrumental production of sound was maintained.

Early examples of non-local listening of instrumental music include the Electrophone, the Telefon Hírmondó and the Théâtrophone, three audio distribution systems that became available in the late 19th century in Europe. These systems supplied news, music and live theater through telephone network, the same technique Thomas Cahill's used for the transmission of the sounds he produced with the organ he developed around the same time: the Telharmonium. These fascinating early attempts were followed closely by radio broadcast, which started the era of music distribution. Furthermore, recording technology not only made non-local listening possible: it also allowed the user to playback music at any time.

While it is true that these changes drastically modified the notion of the listener, the invisibility of its performance did not trigger in the composers of the first half of the 20th

century the desire to create works that specifically dealt with theses issues. While we can make the exercise of imagining works of these nature with the existing technologies of the time (e.g. a pieces for orchestral instruments and sounds from the radio, or from records), this may only be possible due to our knowledge of similar experiences and aesthetic revolutions that have happened since then. Moreover, the amount of control over the aforementioned technologies was limited.

The advent of electronic music

The advent of electronic music in the 1950's provoked yet another change, which had a more significant impact. Sounds produced at a studio and recorded on tape were later played back in concert. The absence of performance actions whatsoever on stage acted as a catalyst that opened up new forms of expression, in which the gestural and visual actions that are inherent to music making were examined. John Cage bluntly summarized this reaction in a 1961 interview with Roger Reynolds: "I think that the most important thing to do with electronic music now is to somehow make it theatrical, and not through such means as turning the lights out, but rather through introducing live performance elements. That is to say, people actually doing things [...] the actual, visible manipulation of the machines" (Cage, 1967)

During the post-war period new ways of presenting music on stage questioned the social construct of the concert as well as the limits of Music as an art form. Within the many artists that contributed this movement (DADA, Performance art, Fluxus), Mauricio Kagel's work in Cologne on what he called Instrumental Theatre was foundational. Moved by the need to recuperate what had been lost in Western Classical music—the visual nature of Music, the

physicality of the performer; all in all: music “not for the ears alone”[3]—Kagel focused on the gestural elements of music making and the choreographies that are inherent to the concert experience. In his work *Sonant*, Mauricio Kagel articulates an irony on the state of New Music, by playing with the contrast between the magnitude of the actions needed to realize certain sounds and their acoustic result, for instance, by requiring from the performers inextricable movements which produce little sound.

[3] I borrowed the expression “not for the ears alone”, which gives the title to Part II of this paper, from Björn Heile (Heile, 2006).

II. Multidisciplinary composition: 2000-2017

Although several figures worked around the topic of the physicality of performance in music-making after the heyday this approach had in the 1960's and 1970's,[4] the emphasis on this topic decreased or, to say the least, became peripheral. However, during the first few decades of the XXIst century, it has sprung again.

Drawing not only from experiences in "high-art" in the 1960's but also from a wide range of work from the pop-culture and mass-media circuits, Jennifer Walshe (2016) has coined the term "The New Discipline" to denote the practice of several composers that reflect on problems of musical performance by using elements and techniques that come from other artistic realms, such as theater, dance, installation art, etc. She uses the term "discipline" not to mean that a new artistic discipline has been developed, but rather to denote the rigor with which the critical thinking is applied to re-considering all the extra-musical as being as important as the sonic element. While labels can be tricky, the New Discipline text has been instrumental in opening paths for the discussion of these diverse practices.

The return of choreography and gesture

The work series *Next to Beside Besides*, written by danish composer Simon Steen-Andersen between 2003 and 2006, archetypally showcases the approach of composition applied to the body of the performers, as it consists of a bare application of the physical movements required to play his solo cello piece *Beside Besides* to a variety of other

[4] See Paul Craenen (2014) for a detailed historical account and extensive commentary.

orchestral instruments for each of the pieces comprising the series. The performance notes read:

> What if the composition was thought of as a choreography for musician and instrument – with sound as a consequence? Then the same piece would sound completely different on instruments with different relations between movement and sound. And would it then be the same piece at all? (Steen-Andersen, 2004)

While this example asks from the musicians nothing else than the exact movements they ordinarily use, other composers have manipulated these limits. Falk Hübner has conducted the most methodic research on the subject and has suggested a taxonomy of these approaches by classifying them either as *extension* or *reduction* of performative tasks; i.e., whether the musicians are asked to perform *additional* tasks than those needed for the ordinary execution of their instruments, or to *remove* movements, instruments or expressions from their ordinary practice.

Reflecting on what would be labeled by Hübner by *extension*, Shlomowitz discusses the topic by naming it the “Automaton Approach”. In his view, while in the past works engaging physicality required from the musicians the performance of theatrical roles well beyond their professional reach resulting in naïve outcomes (e.g. Kagel’s *Atom*), in the last two decades, composers have reached a higher level of maturity in dealing with physicality by drawing from abilities that are inherent to music performers, such as performing synchronized gestures. Furthermore, this success is achieved by using a quasi-familiar work method (extended musical notation) and by rhythmicizing the movements to go along with the musical layer. Unlike “Next to beside besides”, in Shlomowitz’ “Letter Pieces” (see page 11),

the actions executed by performers do not necessarily have a direct sonic consequence, as they are often mute gestures. However, they are often scored in a one-to-one relationship with a sound produced by another performer, in a practice arguably modeled after the one-to-one relationship that is inherent of instrumental performance. Shlomowitz' creates artificial relationships and gives them the illusion of credibility by repeating them, only to break them later—in other words, his work deals with couplings, de-couplings and re-couplings (Shlomowitz, 2016).

Technological expansion: hybrid instruments, hybrid bodies, hybrid spaces

Simon-Steen Andersen explores *virtual* ultra-extended instrumental techniques in his piano concerto by having standard piano sounds contrasted with sounds from a destroyed piano. The latter is seen in concert as a projection of Nicholas Hodges, the same soloist performing on the "healthy" piano, sitting at the destroyed piano. The documentation of the piano destruction, consisting of an 8 meter free fall, was shot in slow-motion in pre-production. Bits of this video are projected forwards and backwards at different speeds on a second screen to accompany certain passages of the music in dance-like fashion. In this way, the *stage space* and the *instrumental technique* expand to include in the composition a once-in-a-lifetime exploration.

In "Public Privacy" Brigitta Muntendorf focuses on the *expanded space*, by exploring the online-accessible intimacy of instrumental music learning typical of the XXIst century. In the first three numbers of this series, she deals with "the phenomenon of *covering*", or "the transformation of the private youtube-living room into a public stage and happening"

(Muntendorf, 2015a), by projecting fragments of this user-generated performances alongside a live performer.

The expansion of the bodies, the instruments and the spaces by technological means has been the central theme of the output of Stefan Prins, whose PhD composition portfolio is titled “Hybrid bodies in hybrid spaces” (Prins, 2017). In “Generation Kill”, he focuses on making “invisible technologies visible” (Ecke, 2014) by portraying a non-classical instrument, the game console joystick, referring to how those devices were used during the Iraq war to remotely drop bombs with drones. Joysticks are used during the piece by four performers who are facing the stage to control video pre-recordings of four musicians performing on stage, as well as audio material. The four musicians play behind semi-transparent screens onto which video pre-recordings are projected—as well as war images towards the end of the piece.

While the pre-recorded videos consist of instrumental actions by the performers, the whole set-up of the piece goes beyond this artifact as it presents itself as a recreation of the hybrid reality which is characteristic of our contemporary society. Not only a significant portion of socialization has shifted to the Internet; wars are now fought remotely by digital natives who expertly manipulate the instruments that are trademark of their upbringing. The subversive and revelatory qualities of the piece lie in the drastic and captivating manner in which the notion of hybrid realities are presented as an unquestionable and irreversible element.

Alexander Schubert has explored the multiple relationships that are possible between the real and the virtual all throughout his output, with a particular attention to gestural movements. In his earlier pieces he used wearable sensors, thus investigating the

relationship between humans and technology. His more recent work “Hello” includes a video-projection of himself sitting in his own living room performing a series of bodily gestures (e.g.: fake reading glasses with his hands, a tennis stroke or having a snack). The music score has, like Shlomowitz’ *Letter Pieces*, an element of openness, as the performers are asked to choose one sound to correspond with each of the gestures, within certain guidelines. However, in “Hello”, Schubert appears as a virtual gesture-maker who directs the live musicians. By conducting the ensemble from his living room, Schubert expands the stage, as he invites the audience into his “personal world” (Schubert, 2014).

Strategies for audiovisual composition

The risk of incorporating video on a prominently musical work is that the image, due to its persuasive characteristics, takes precedence and distracts the listener from the music. Composer Michael Beil’s solution is to make the video “part of the conceptual strategy of an audiovisual composition” (Beil, 2011) which, he explains, makes music and video become *doublings* of each other; i.e., they become two layers depicting the same *strategy*.

For many of his pieces, Beil has nurtured, like others mentioned earlier, from the the choreographies that are inherent to instrumental performance, which he has *extended* with small dramatic actions executed by the performers, e.g.: walking, hat tipping or performing fake percussion strokes. The musicians are usually seen performing these gestures in the *extended space* of the video projection, which is subject to the same *strategies* that are present in the music; for instance, speeding up and down. As a result, the audience is constantly shifting between the observation of real-life performers and their duplicates, or virtual counterparts—an experience akin to socialization in our image-mediated

contemporary society. I took the approach of making the music and the video part of the same strategy in “El libro de los flasheos”. However, I made audio and video belong not to the same *procedural* strategy but to the same *semantic* strategy.

Schubert’s audiovisual messages are structured, for the most part, around common cues for visuals and audio. This one-to-one approach (see Shlomowitz, pages 34-35) could arguably be described as audiovisual sampling, a concept which he thematizes in reverse—“humans at the service of the machine” (Schubert and Kanga, 2016)—in his work “Sensate Focus”, where each one of four performers get an individual spotlight that is turned on and off to depict them in gesture-like positions with digital-like precision.

However, Schubert seeks for “a balance” between rigid rules he sets up and the possibility of breaking them, as he “gets bored” of these static relationships. It is at this point when narrative elements come to the foreground. For instance, in “Hello”, the video shows Schubert performing prank calls on his neighbors, uploading a video of the performance of the piece to YouTube, and telling the audience how the piece will end as he is the subject of an interview about the work in progress. In this way, the piece becomes strongly *self-reflective*. Both about itself as well as about New Music as a whole. I share with Schubert the methodology of not adhering strictly to one method for articulating the visuals with the music by placing more emphasis on the *narrative* and the *semantics* (see detailed discussion on “El libro de los flasheos (The Book of Trippin’)” in Part 3).

Distribution and consumption of New Music in the XXIst century

On the other hand, Schubert’s portrayal of the Youtube upload as a part of the compositional process is an acknowledgement of the fact that “digital documentations can have a

supremacy over live performances", a fact pointed out by Walshe (2016). Schubert is indeed aware of this, as can be appreciated on his own post-produced performance documentations, in which he adds an additional compositional layer by performing further video-edits combining the documentation material with the source video files used for live projections to deliver a distinct Youtube experience (Schubert, 2017). I see the awareness of change in the circuits of distribution of New Music as one of the key elements in the change in aesthetics in music composition as the composer now has potentially two spaces for which he is composing at the same time for every piece: the concert hall and the Internet. These thoughts are present when I compose, and I don't deem them as negative but rather as a distinct characteristic of our time.

The changes in the distribution naturally results in a change in the way art-makers consume art themselves. This is somehow present in Walshe's text: while the ancestors are found within what at the time were high-art *niche* circles (Dada, Fluxus, Situationism, Kagel et al), much of what "has happened since then" inhabits more mainstream or pop circuits (MTV, the Internet, Beyonce ripping off Anne Teresa De Keersmaeker, Stewart Lee, *Girls*, style blogs and yoga classes at Darmstadt, Mykki Blanco, etc). This is implicitly signalling toward the engagement with wider breadth of culture—an inclination I endorse—as opposed to reinforcing *niche* orientations that have been prevalent in the circuits of academic composition—what I have referred to as *inward-focus.* In other words, the aforementioned restructuring of power within New Music institutions that has been the outcome of the Digital Revolution has arguably opened up spaces for aesthetics that are not worried with a sense of belonging, but rather nurture freely from the diversity and hyper information that are characteristic of contemporary society.

Fast-paced work and composers as performer

In the realm of New Music, an increasing practice of composers to include themselves as composers can be observed—a practice I undertook on “El libro de los flasheos”, for which I performed the part of the actor-narrator. During my compositional process, I made voice-over recordings to accompany the music. As I began to perform elaborate manipulations on these recordings, it became clear that there was no way back: my voice was part of the piece. Later on, I developed the concept for the video, which required the participation of an actor-narrator reciting portions of the same text I had used for the voice-over recordings. While this role could have been fulfilled by another performer, matching the voice of the live actor with the voice-over recordings was the most organic solution. This led me to take on the role of the actor. A similar situation is described by Schubert, who included in his video for “Hello” shots that were originally done as tests in his living room (Schubert and Kanga, 2016). In these cases, the multidisciplinary nature of the compositional approach has the effect of increasing the pace of the production process, as the standard roles of concert music are exceeded. One possible outcome is the primacy of pragmatic decisions, which may result in the composer’s involvement in the performance of their own work to compensate for heterodox requirements.

While Walshe agrees that extended concert music practice is “always working against the clock, because the realms from which it draws have the luxury of development and rehearsal periods far longer than those commonly found in new music” (Walshe, 2016), her asiduous composer-performer practice is not necessarily based on pragmatic decisions. Walshe notes that she doesn’t fully ascribe to the dominant model of Western Music, under which composers create works that multiple people can perform. She instead creates music

that is built-in for her own voice, following a practice that is common in the pop world. Furthermore, although the learning process can be arduous, as pieces are not often notated in standard ways, Walshe's practice doesn't exclude other people from performing her music—a phenomenon she conceives as *covering*.

Performability in electronic music

The problem of performance in electronic music is vast and partially out of the reach of this paper. However, it has been demonstrated that the technical and socioeconomic changes set forth by the Digital Revolution have triggered in art-makers in general, and New Music composers in particular, a change of perspective that has resulted in a new artistic practice. This change is akin to the one that happened after the advent of electronic music, inscribed in the times of the countercultural revolution.

If back then, the disappearance of performers on stage during electroacoustic concerts triggered in Kagel et al the motivation to work with the physicality, theatricality and gestures of the performers, the supremacy of the image that is characteristic of today and the availability of affordable instruments to manipulate the *virtual space* have not only resulted on a renewed focus on the visible aspects of music-making (i.e. its physicality), they have given a new sense of *corporeality* to electronic sounds. One example is Michael Beil's "Exit to enter", a piece in which the procedure of looping and layering—a paramount device of electronic music—can be experienced visually through the action that happens on the expanded *hybrid stage*. One can wonder whether this new corporeality might be a game-changer for non-dance electronic music in giving it a greater recognition by making it "not for the ears alone".

Part 3. El libro de los flasheos (The Book of Trippin')

I. The concept

"El libro de los flasheos (The Book of Trippin')" for string quartet, narrator, live and fixed electronics, and video was commissioned by Centro de Experimentación Teatro Colón and premiered in June 2016 in Buenos Aires by Cuarteto UNTREF with the following program notes:

> El libro de los flasheos (The Book of Trippin') is a composition for string quartet, electronics, narration and video inspired in the aesthetic, the compositional procedures and the spirit of democratization of hip-hop.
>
> The text by Santiago Llach revisits the most symbolic chapter of the most successful work in the history of Literature and adapts it to Buenos Aires' (and LA's) street language. Therefore, I worked with two symbols of Conquering Culture: one for its ethics, the Book of Revelations, and one for its aesthetics, a string quartet. Their words, imagery and sounds, are re-cycled and re-contextualized with a knowledgeable but anti-snobbish approach.
>
> We see Sal and Crazy John reading from the Book of Trippin' and rapping the message from the Man Upstairs to the seven hoods of LA with a playlist nourished by the digital age's Babel Library of Music: we hear electronic and algorithmic music, jazz, tango and noise. (Llach, 2016c)

One way to leverage a critique of any type of statement is to own the statement's arguments and to recontextualize them to generate new meaning. I use this method to articulate my

critique of the state of new music in the early twenty-first century. The main motivation in the piece is to desacralize, or to debunk a myth. These myths are the postwar tradition of New Music and the Book of Revelations. The goal is to depict New Music as a myth which, in spite of being incalculably rich in its intrinsic qualities, must be destroyed in order to re-invent itself.

The music

I created a musical space in which sounds that univocally refer to new music coexist with sounds and musical morphologies associated with other musical experiences that more effectively relate to contemporary society. The music flows naturally to reference certain styles in order to generate in the listener the expectation that certain *hybridizations* are going to happen. And they happen. But then, the music moves forward quite quickly. The strategy that enables to *reference* effectively in a short time is the use of style *clichés*. In this regard, I am in line with Beil's use of quotation ("quickly recognized", on page 24), although I am not as interested having the listener forget the connotations of what they heard. An example is the filter sweeping that happens at 4:57[5], but also Dave Crow's beatbox sounds (0:00-1:00 and throughout the piece), the vocoder-like treatment of the voice (4:45), Bartok's string quartet IV (6:20), Lachenmann's string quartet II (7:20 and throughout the piece), abstract pitch-free graphic notated sounds (12:20), John Coltrane's solo on Moment's Notice (14:47), and "Desde el alma" tango (18:29).

The reason I don't explore these *hybrids* in depth is that the *semantic narrative* is more important than the *structure*. The bottomline *meaning* of the piece is that New Music doesn't need to comply with certain limitations—i.e. *face inward*, or be based on its own sonic

[5] All time cues refer to the performance by cuarteto UNTREF (Llach, 2016a)

tradition. The solution I offer to overcome these limitations is to face outward and relate to elements of contemporary culture and society.

The text

Similarly, the original text used in “El libro de los flasheos”, written by Santiago Llach and Carlos Godoy, uses everyday language to amplify the fictional yet human qualities of the narratives present in the Book of Revelations, resulting in a twenty-first century Greek mythology type of discourse. Again, several *references* to contemporary characters are made: footballers Palermo, Ortega, Maradona and Pelé, and journalists Victor Hugo Morales and Jorge Lanata—or in the LA adaptation: basketball players Kobe Bryant and LeBron James, musicians Kanye West and Beyoncé, comedians Dennis Miller and Louis CK—as well as Motorhead’s Lemmy and Star Wars’ Darth Vader.

Visual elements

The most important element that ties the video, developed in collaboration with Gaby Goldberg, with the text and the music is the *semantic narrative*: the desacralization of established discourses or the debunking of myths, as mentioned earlier. The performance of the narrator and the video deal with this by:

- the use of gestures and objects that are typical of christian iconography, both on stage and in the video (1-3.20), and the manipulation and destruction of both orchestral instruments as well as the book that had been held by the narrator on stage in the beginning—implicitly The Book of Trippin’, in turn implicitly The Book of Revelations (6.45-7.45)

- depiction of MTV music video aesthetic, with narrator/singer/MC rapping lyrics to camera with California's endless suburbs as backdrop (9-12.45)

The third section of the video (16:34-20:00), consisting of site-specific scenes in the workshops and corridors of Teatro Colón, does not deal directly with the spirit of debunking or desacralization, but rather with the manipulation of the sense of expectation: will the narrator come back to the scene?

The above explains how I have structured my audiovisual composition as a *semantic doubling*—or tripling, if we include the text. All layers are connected because they express the same *meaning.* This reassures that, if even if the listener does not grasp all the details of how the meaning is articulated, the main idea will cut through. A reaction from a colleague validates this strategy. Some background is needed to understand his reaction. In 6:18, I communicate a sense of destruction from within the music by quoting chords from Bartok's string quartet IV in the midst of a multitude of samples that are beating loudly while vanishing into nothingness. This sense of destruction is later depicted in the video when the narrator rips pages off that same score, the title being legible. A colleague commented: "I thought I had heard some Bartok chords somewhere. That felt weird, but then I saw the Bartok score in the video, so it made sense". The quotation was so strong to my colleague's ears that his reaction couldn't go beyond a mere recognition. However, the *meaning* of the quotation was clarified when it was duplicated in the video.

In my approach to visuals I prefer not to create a system that dictates the relationship between visuals and sound. I undoubtedly draw from strategies that have proven to be effective. The strategy of couplings and de-couplings between gestures seen and sounds

heard is one example of a strategy I used it in the beginning of the piece. However, because *semantics* mandated, the content of the gestures (i.e. christian iconography) stands out over the coupling/decoupling sequence.

In the first part (1-7.45), a sense of body expansion plus a slight sense of concert space expansion are created by having the narrator both on stage as well as in the video projection in the same attire. The space expands further in the middle portion of the video to include Southern California's iconic endless suburbs (9-12.45). In the last portion (16:34-20:00), the space expands by "breaking the fourth wall" to include the whole theatre (its workshops and its corridors).

II. The technique and praxis

While composing the music for both the string quartet and the fixed electronics for "El libro de los flasheos", I used multiple instances of the sampling techniques discussed in Part 1. Table 1 indicates the source materials used:

Section	String quartet	Fixed electronics
A	**1**	**2** processed
B-C	**3** for scratch composition as well as live FX sends	**4** unprocessed
D	**1**	**4** processed **3** with sends to live FX
E	**0**	**4** processed **3** unprocessed
F	idem	**4** processed
G-H	idem	**4** processed **3** unprocessed
I	**0** and **7**	idem
J	**0**	idem
K	**0** for 1st violin and cello **1** for 2nd violin and viola	**2** and **3**, both processed
L	**0** for cello **1** for rest of the quartet	**4** unprocessed **2** and **3**, both processed
M	**1**, then: **0**, graphic notation passage	**4** unprocessed **2** and **3**, both processed **1**
N	**0** graphic notation	**4** unprocessed
O	**0**	**2** and **3**, both processed
P	**1**	idem
Q	**8** for violin solo **0** rest of the quartet	idem
R	**1** + echoes of **5** for upper strings **0** for cello	**3** (unprocessed), **4** and **5**
S	idem	idem
T	**0**, then **5**	**4**, **5** and **6**
U	**5**	**4**, **5** and **6**

KEY:

0. Spontaneous composition

Sources involving sampling:

1. Tom Johnson + Dave Crow: an audio sample obtained by combining the rhythm of Dave Crow's beatbox performance during his TEDxGöteborg talk, with the harmonies of Tom Johnson's Chord catalogue. (see detailed explanation on page 48) *Used always as scratch composition for later transcription to string quartet, with the exception of M.*

2. Dave Crow: in addition to the above, Dave Crow's sample was used on its own.

3. Helmut Lachenmann: fragments from his String Quartet N. 2, performers unknown.

4. Narrator: a recording of piece's text by myself, playing the narrator.

5. El libro de los flasheos: audio sample of the work-in-progress on this piece.

6. Desde el alma: an audio sample created by myself consisting of several versions of the tango *Desde el alma*, by Rosita Melo.

Quotation-like passages not involving sampling:

7. Bela Bartok – String Quartet N.4, first movement.

8. John Coltrane – solo on "Moment's Notice", 1957 version included in album Blue Train.

Table 1 – source materials used on "El libro de los flasheos (The Book of Trippin')"

“Tom Johnson + Dave Crow” sampler

Among the techniques I used, the most elaborate mechanism was the one I devised for 1. Tom Johnson + Dave Crow. In his piece “Chord Catalogue”, Tom Johnson explores all possible chords within an octave for a given number of voices (Johnson, 2015). While the piece is based on harmonic concerns, it focuses on voice-leading rather than on the classic dichotomy between consonance and dissonance. Since the chords are presented in a mathematically-conceived order, the filling up of the possibilities is made aurally evident—we hear the voices ascending chromatically to fill a given range within the octave. As a result, the *closer* any two non-contiguous chords are in the series, the *smoother* it is to jump from one to the other in terms of voice-leading. The opposite is also true: the *further* they are, the more *abrupt* the resulting jump. Based on this observation, I prepared a sampler instrument containing a fragment of the “Chord Catalogue”, which I could navigate using the *Start Time* parameter and transpose by using notes coming from a MIDI controller.

Figure 6. The Sampler instrument loaded with harmonies from Tom Johnson’s “Chord Catalogue” in the rhythm of Dave Crow’s beatbox performance at TEDxGöteborg presentation.

The audio file consisted of the harmonies of the “Chord Catalogue” played on virtual string instruments with the rhythmic inflections of Dave Crow’s beatbox performance during his TEDxGöteborg talk. In order to obtain this sample, I completed the following steps:

1. Sliced an audio sample of a performance of “Chord Catalogue” at one slice per chord

2. Extracted the rhythm of Dave Crow's performance by using Ableton's *Extract Groove* function, in order to obtain a rhythmic sequence in the form of a MIDI file
3. Ran the rhythmic sequence while changing the destination sample (i.e. the chord from "Chord Catalogue") once per measure
4. Exported the outcome as an audio file and then converted it to MIDI notes using Ableton's *Convert Audio to MIDI*
5. Assigned these MIDI notes to virtual string instruments and then exported them as audio file

This process included two instances in which the output was colorized in comparison to a theoretically precise implementation of procedure: the acoustics of the room in which the original recording was made and the specific characteristics of Ableton's algorithms.

Furthermore, the *Start Time* parameter was controlled by the device *Multimapper Discrete*, a variation of the *Multimapper* device by mothergarage that I created in Max for Live. My contribution consisted of adding the controller *Steps* (N) on the right hand side, which forces the controllers on the left to produce values that are multiples of the quotient of 128 by N. For instance, in Figure 7 *Steps* is set to 16, which forces output values for the knobs on the left at 0, 8, 16, 24, and so forth. I used this setting in order to use a knob on a MIDI controller to select between the 16 chords available in the audio sample (Figure 6).

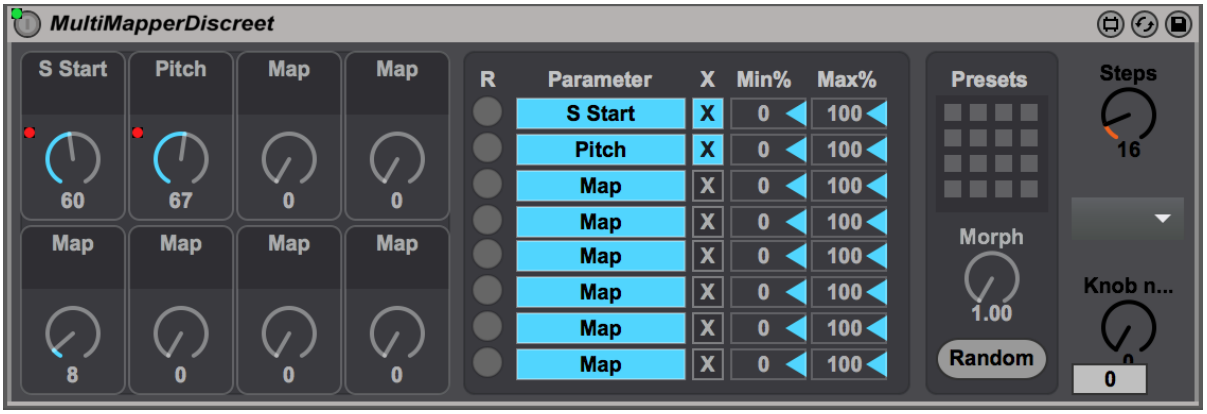


Figure 7. The Multimapper Discrete plugin (figure includes a typo).

This is a good example of a creative process I often use: spending a significant amount of time developing a piece-specific setup which allows me to improvise or compose on the fly—like both musique concrète and hip-hop were in their beginnings. In this case, I performed on a keyboard, which allowed me to transpose the pitch of the audio as in the classic sampler instruments, and used the MIDI controller knob described above to select available cords.

The Narrator

I performed the role of the narrator at the premiere of “El libro de los flasheos” and during one subsequent performance. In a sense, the piece can be regarded as performer-specific, since my face is visible in the video and my voice is present in the fixed electronics as well. However, the piece can also exist as string quartet, electronics and video (no narrator). Presenting the piece with another performer in the narrator role would require significant audio and video re-recording and post-processing.

“El libro de los flasheos” shares with “Your piece here” the device of exploiting the effect of expectation by using the time expansion and compression techniques described earlier

(pages 12-15) on a narration-oriented speech audio file. However, in comparison to “Your piece here,” “El libro de los flasheos” obscures linearity, as the full text is only heard in the middle section of the piece (K-Q), while the opening section only offers processed and unprocessed scattered fragments. This disruption seemed more appropriate in “El libro de flasheos” given both the length of the piece and its subversive motive. In terms of storytelling, the form of this piece is analogous to the form of “Dear Gross Man I Play Online Video Poker With” because both are deliberately antithetical to the model of exposition followed by development.

Helmut Lachenmann sampler

The Helmut Lachenmann sampler was used in multiple ways in “El libro de los flasheos”: as scratch composition for the string quartet, as send to live effects during the performance, and for the composition of fixed electronics.

While the use of these samples for scratch composition occurred in sections B-C, their use for the composition of fixed electronics only starts in section D. This order of appearance contributes significantly to the sense of integrity present in the piece. This shows that, while the material present in the fixed electronics in section D could have been programmed as a recording and playback on the fly on a computer program at a high cost, in some contexts the same organic results can be obtained with borrowed samples. Similarly, if samples have been used for scratch composition, they can be effectively used for send to live effects during a performance in “send only” mode.

Desde el alma

After an abundance of sampling techniques have been presented, the aesthetic of the piece is conceptually closer to a *remix* aesthetic in sections T-U. To reinforce this idea, instead of using a single version of “Desde el alma,”I used an audio sample that was itself a collage made with different instrumental versions of the vals-tango. Additionally, in section T (m. 503-507), the technique of time compression was used to denote an acceleration of time. The rhythmic values of the sequence were halved. As a result, every other bar of the original composition was skipped.

El libro de los flasheos

“El libro de los flasheos” was the first piece in which I utilized an audio file of a work in progress as source material for a sampler instrument used to compose the piece itself—a technique I would keep coming back to in other compositions (see pages 25-26). As with the “Desde el alma” sampler, the implicit *remix* aesthetic the piece had acquired at that point in the creative process triggered this compositional idea.

Conclusion

In the opening paragraphs of this paper I argued that New Music has excessively *focused inwards* as a source of inspiration. In other words, that critical thinking in New Music has been applied to a selected corpus of sounds: those which belong to its own tradition. *Referentiality* is one possible solution to this problem—one that has been also suggested by others under the term of relational music. But embracing the relationships between the music and the world also means embracing cultural connotations. Thus, I claim that the use of *borrowed music* is a valid strategy for composition of music that relates to contemporary society.

In “El libro de los flasheos” I articulated an audiovisual narrative that depicts New Music as a myth that must be destroyed in order to reinvent itself. I achieved this in the music by working with *style clichés* and recognizable morphologies of both New Music’s own tradition as well as other popular music sources. By generating an expectation about the appearance of *hybridizations*, which are satisfied promptly but not investigated deeply, I organize my work not (only) around the articulation of musical structures, but through the repeated communication of a *meaning*: that New Music needs to *face outwards.* In other words, that the myth of New Music as a closed self-sustainable ecosystem is false.

We are living in times of big changes and changes can be exciting and fearful. In the past, artists have responded to agitated times by urgently referencing the new realities in their work, by taking its raw elements and placing them “in your face”. I believe we are in a time of

significant changes on several levels. Moving forward, my main motivation as a music-maker is to reflect these changes in my work.

Referencing reality takes courage, as it has a higher risk of coming across as low-fi in comparison to cultural artifacts that are more established. I type these lines into the dystopian and all-encompassing container of private and public information called the Internet: we can make art with this mess.

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Appendix: El libro de los flasheos (The Book of Trippin')

Federico Llach

El libro de los flasheos (The Book of Trippin')

for string quartet, video, electronics and narrator

commisioned by Centro de Experimentación
Teatro Colón

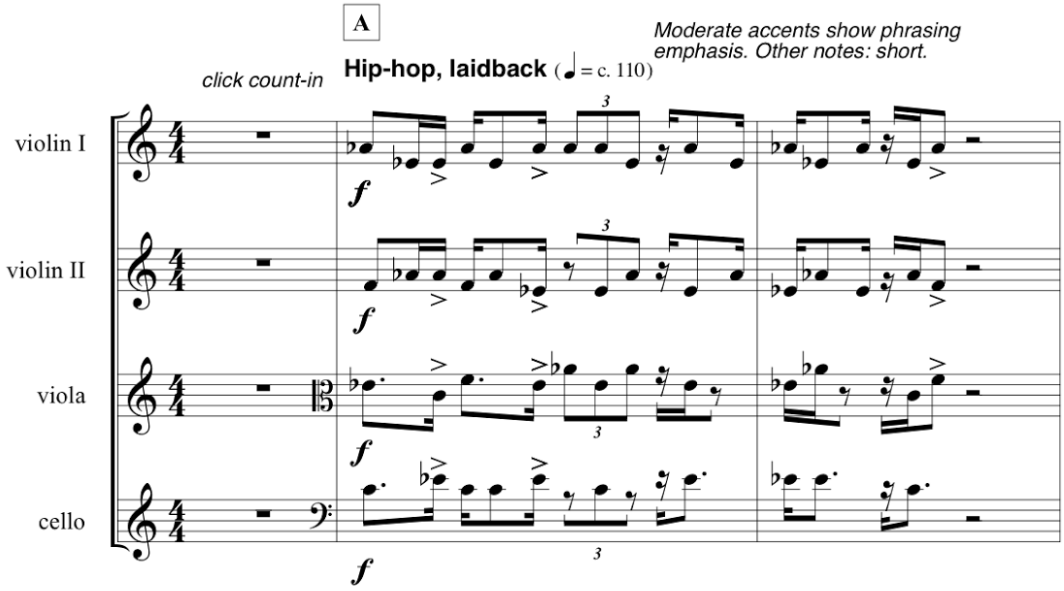
String quartet score

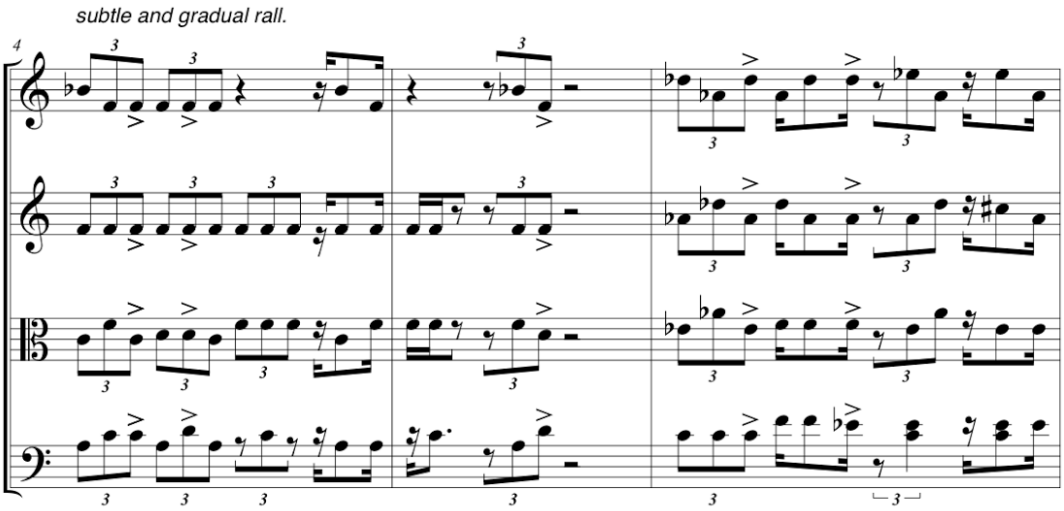
Score

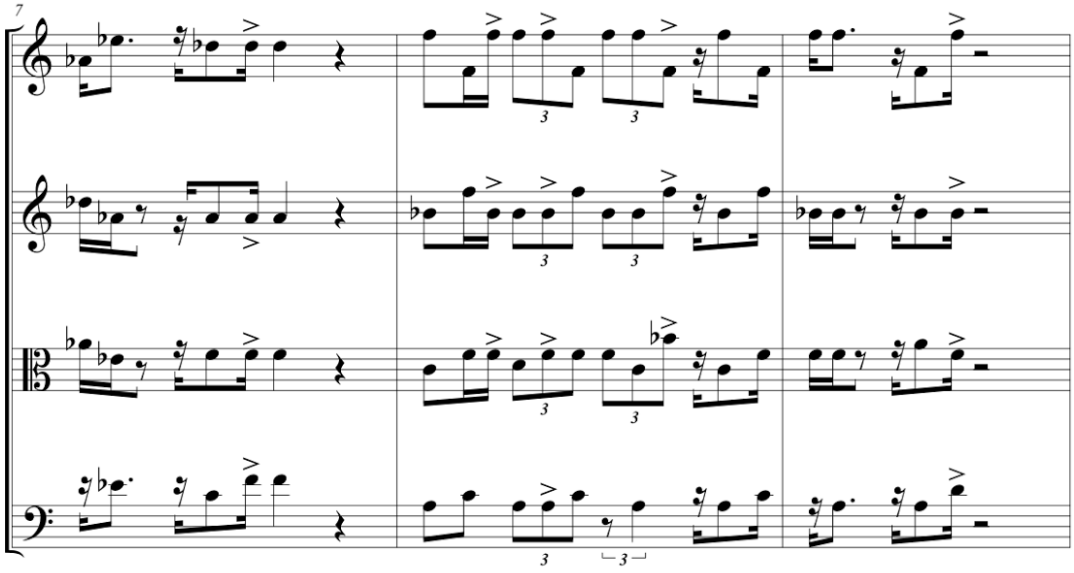
El libro de los flasheos

dedicated to cuarteto UNTREF

Federico Llach



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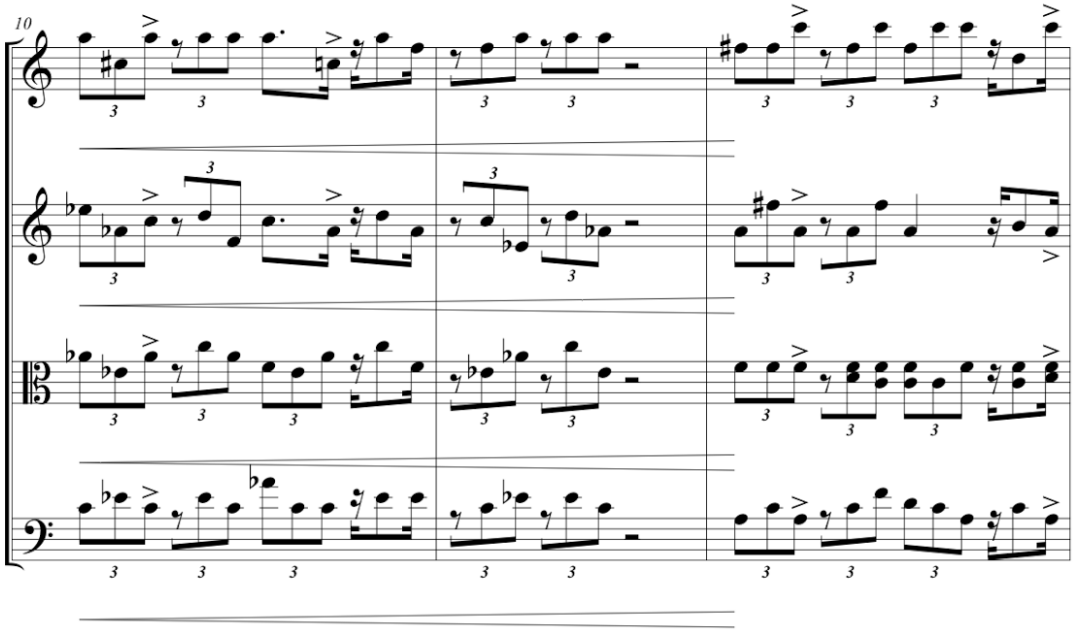
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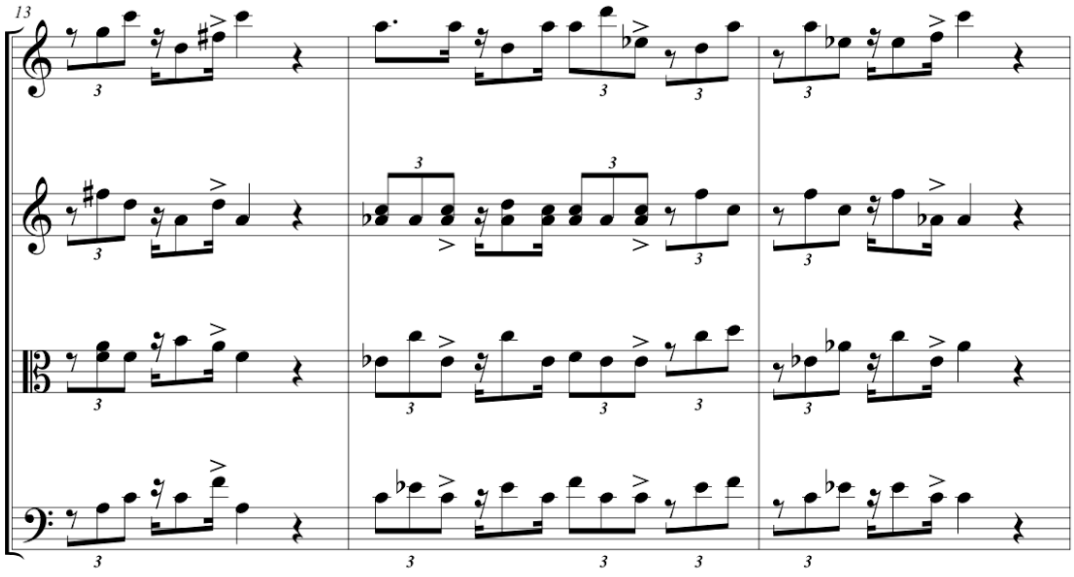
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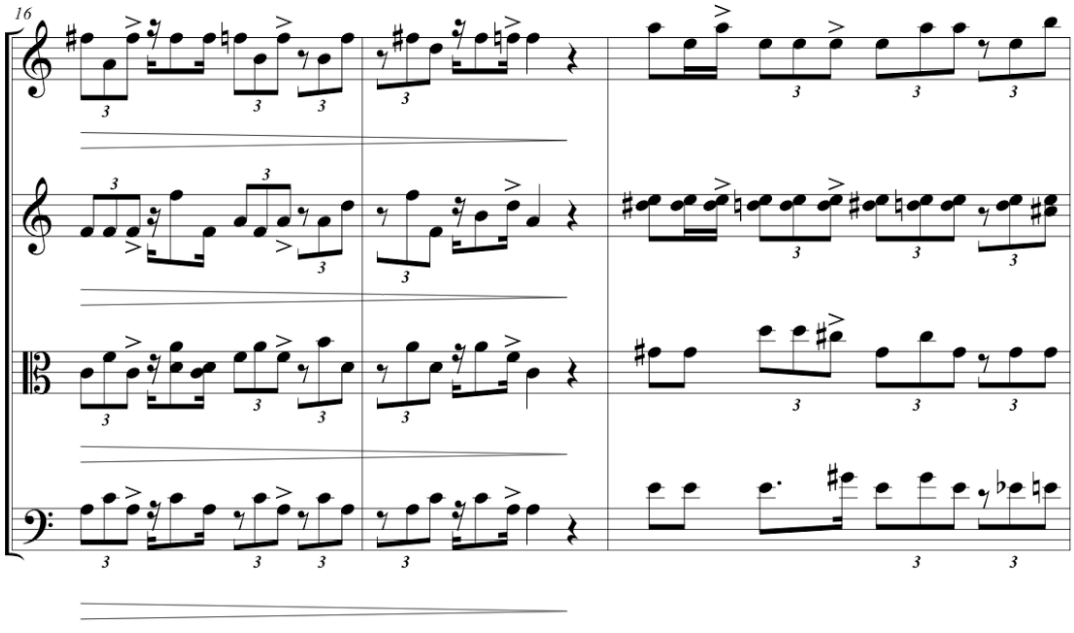
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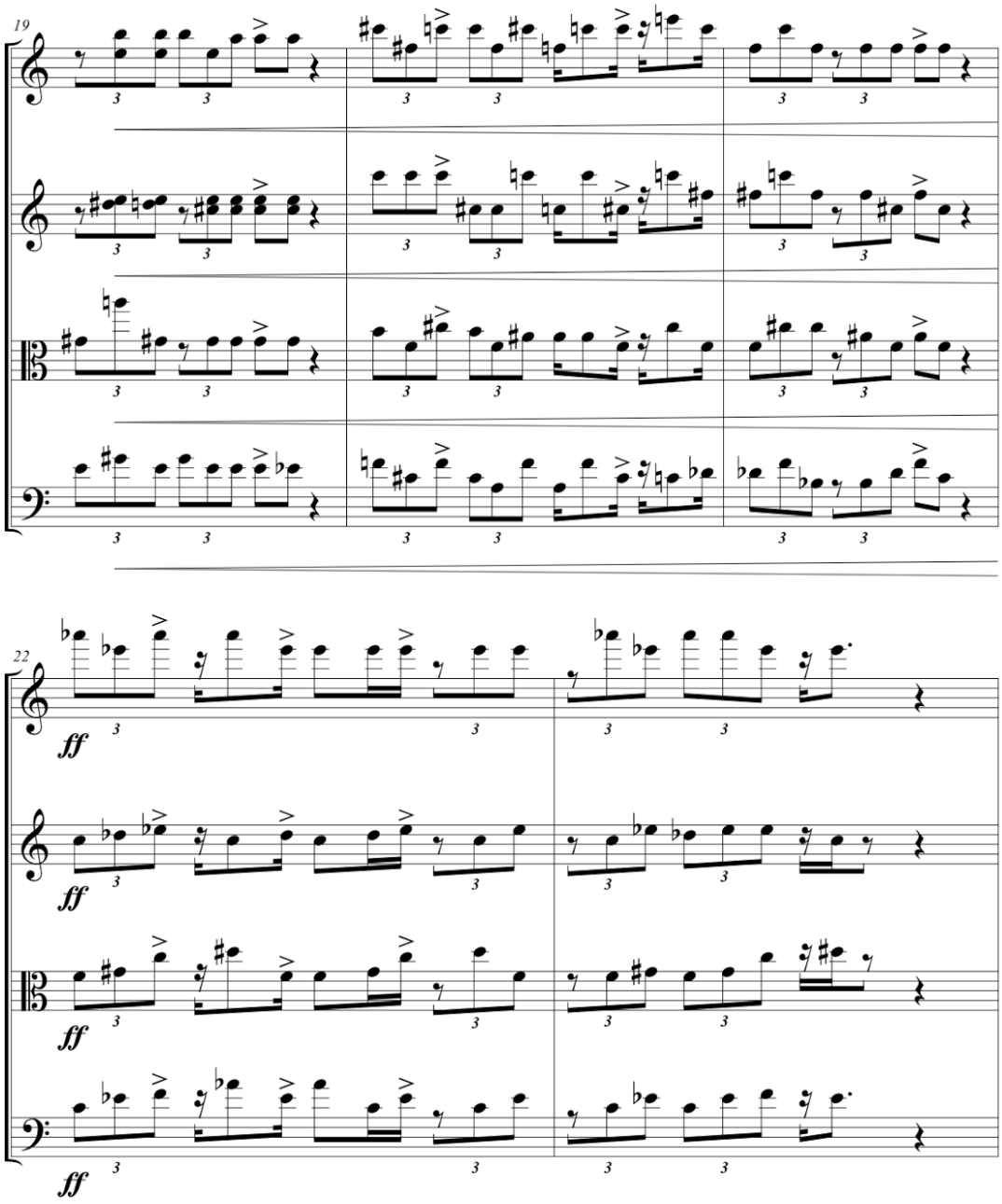
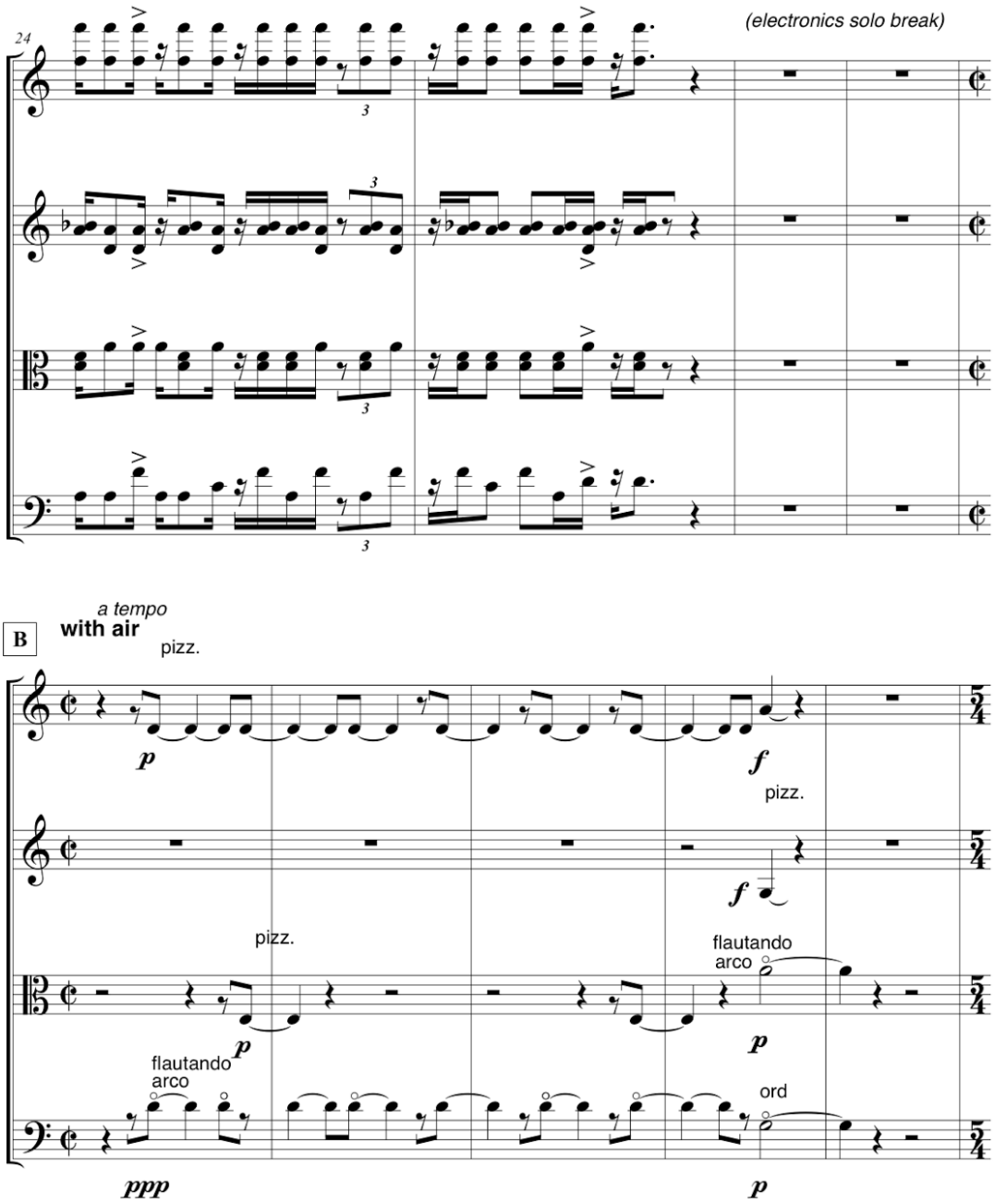
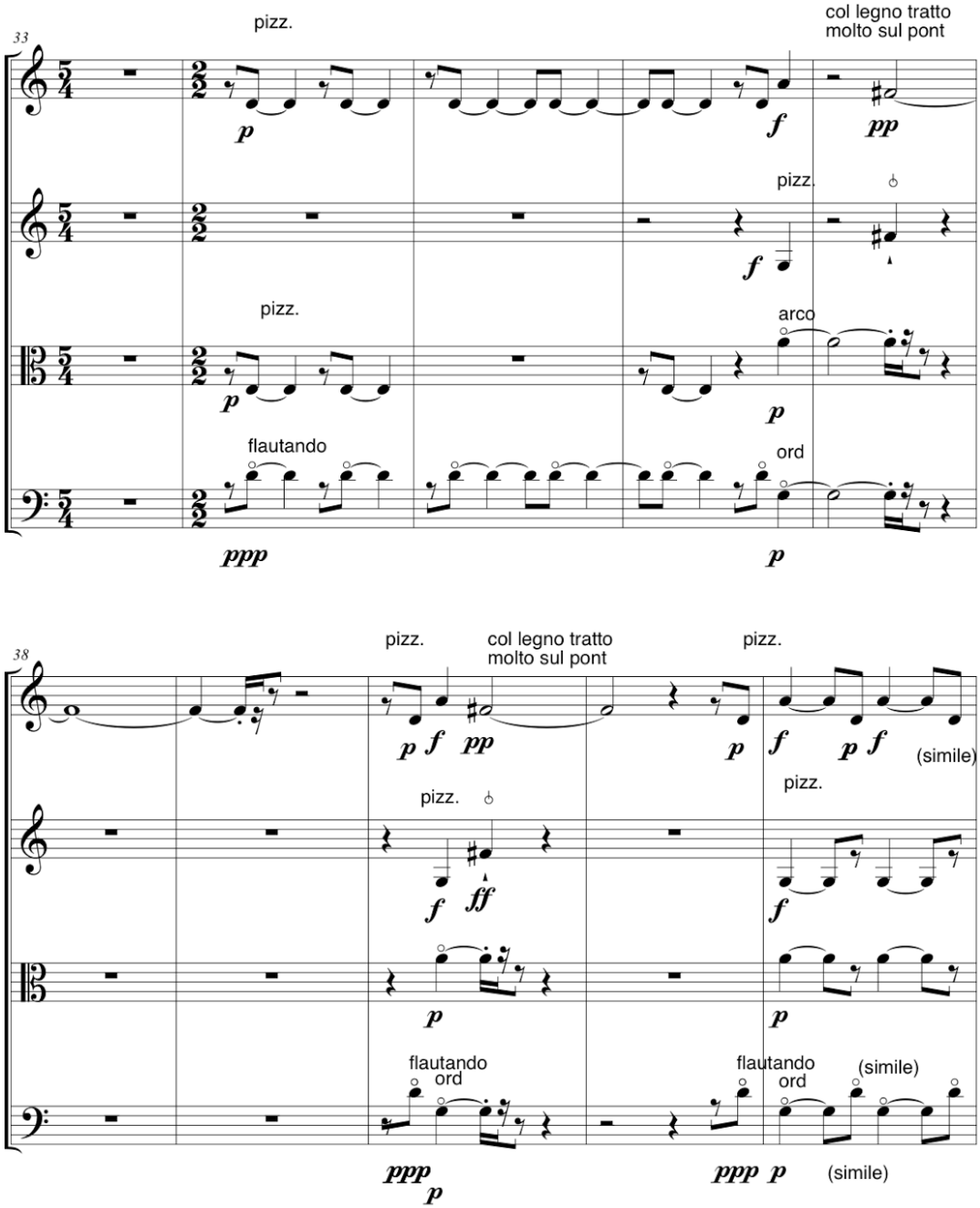
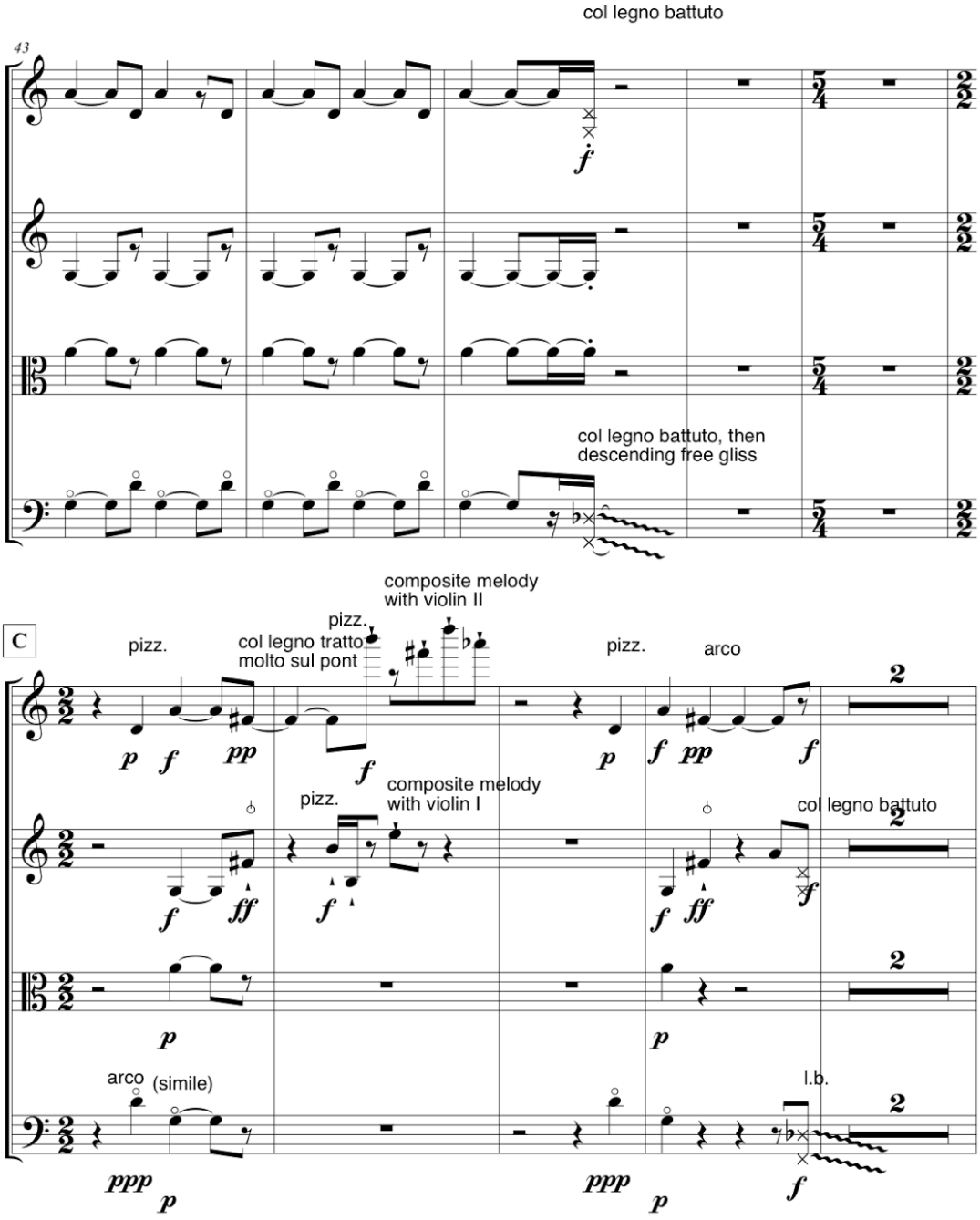
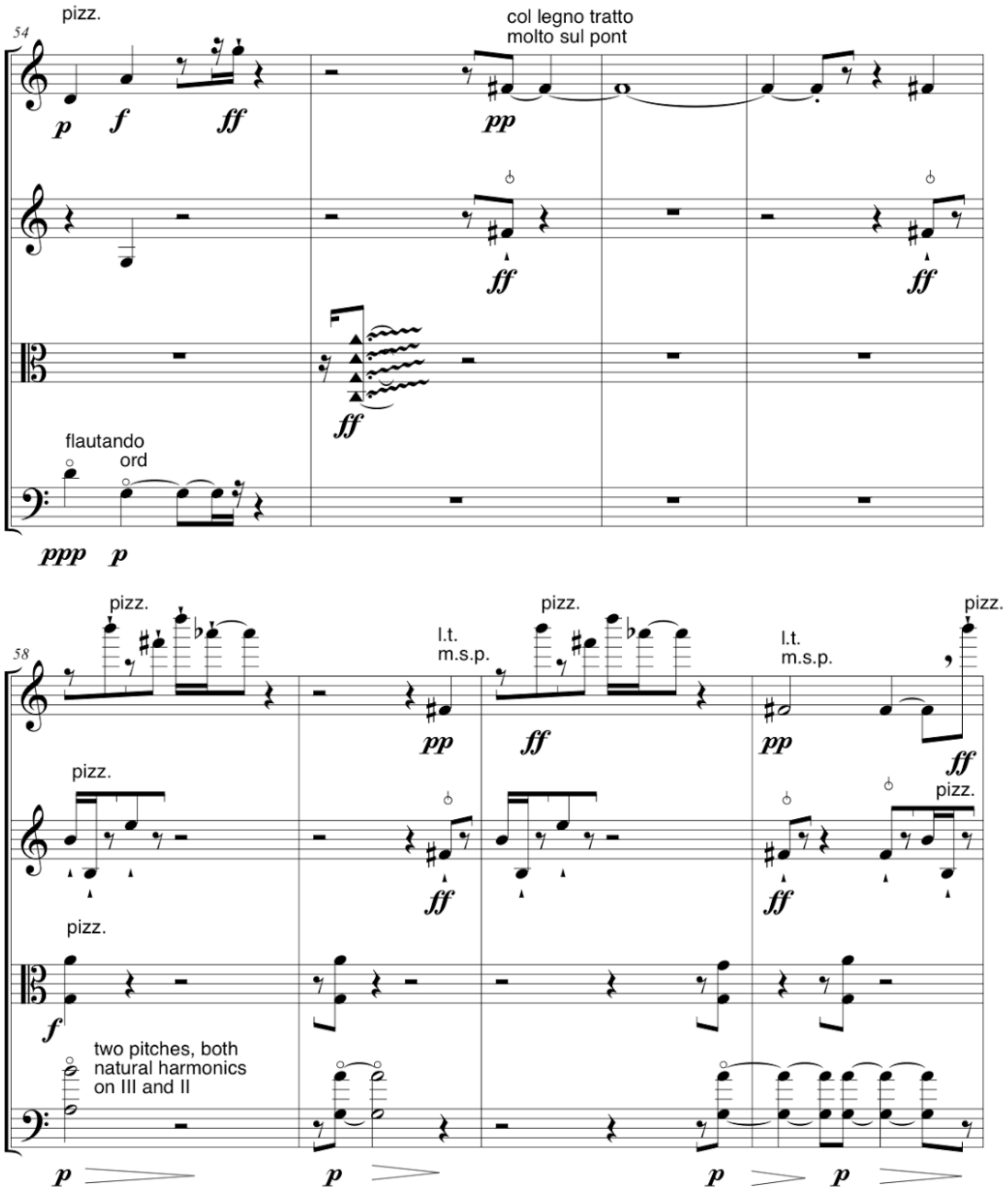
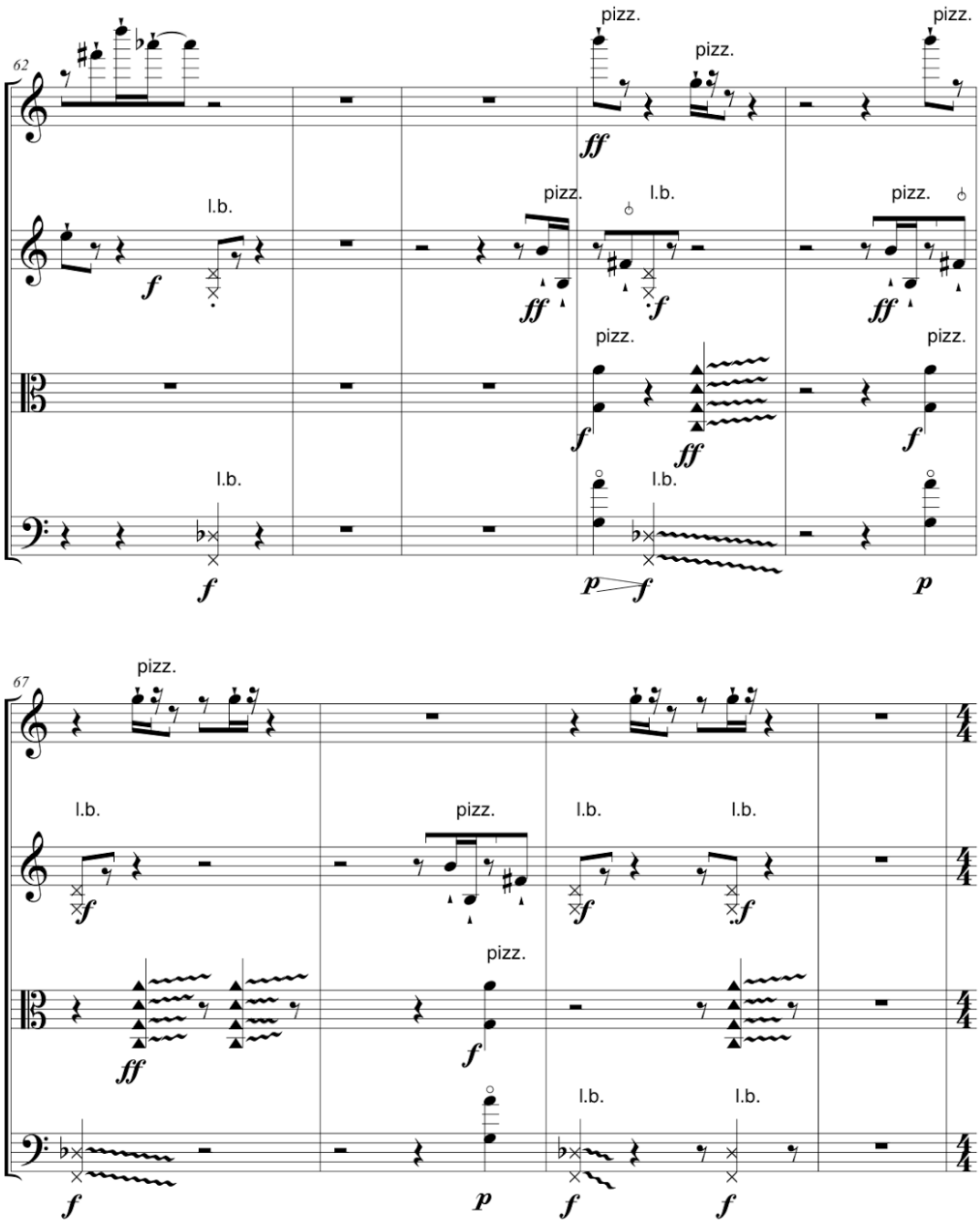

19
22
ff
ff
ff
ff

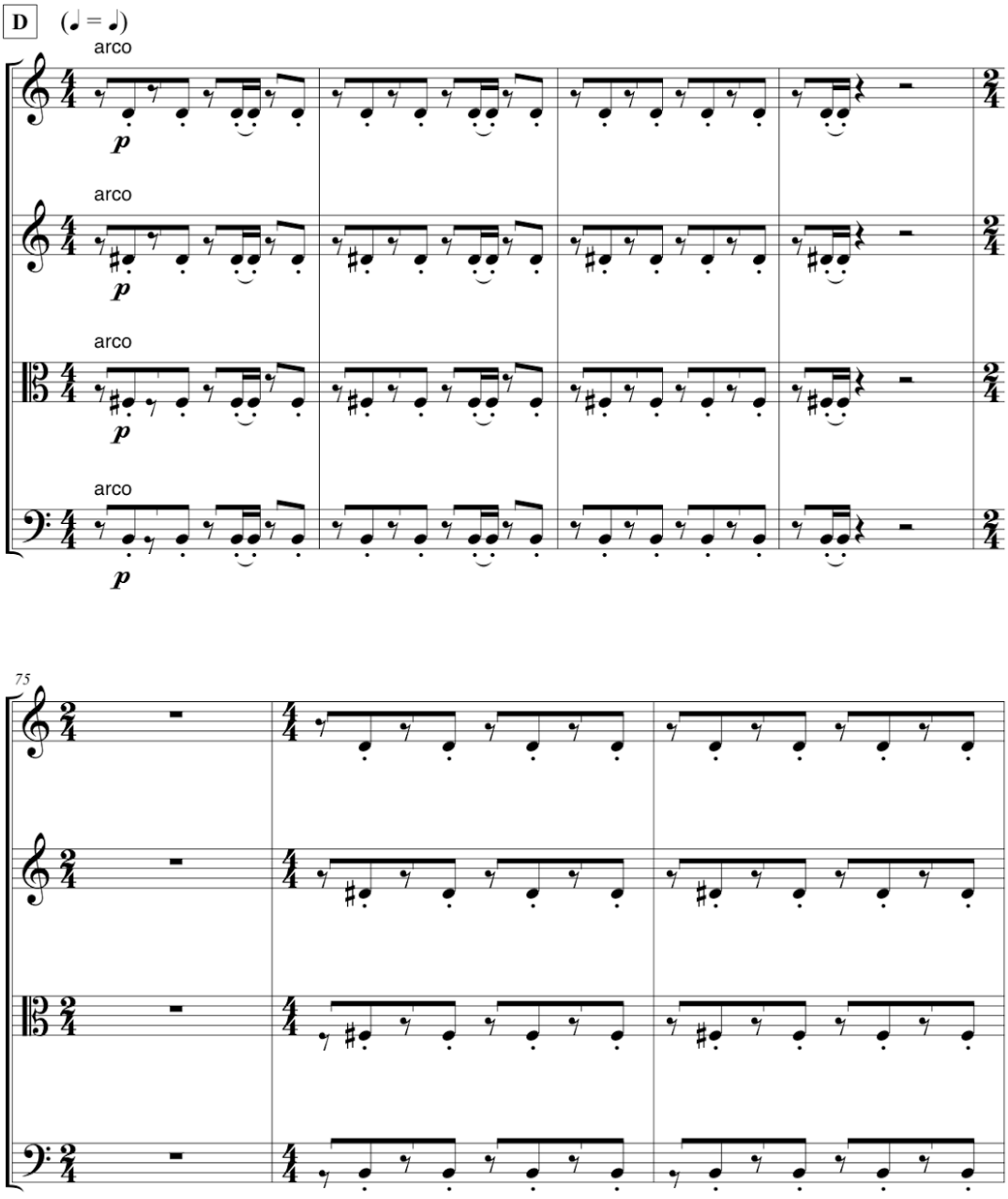

24
(electronics solo break)
B
a tempo
with air
pizz.
p
f
pizz.
f
pizz.
flautando
arco
p
p
flautando
arco
ord
ppp
p

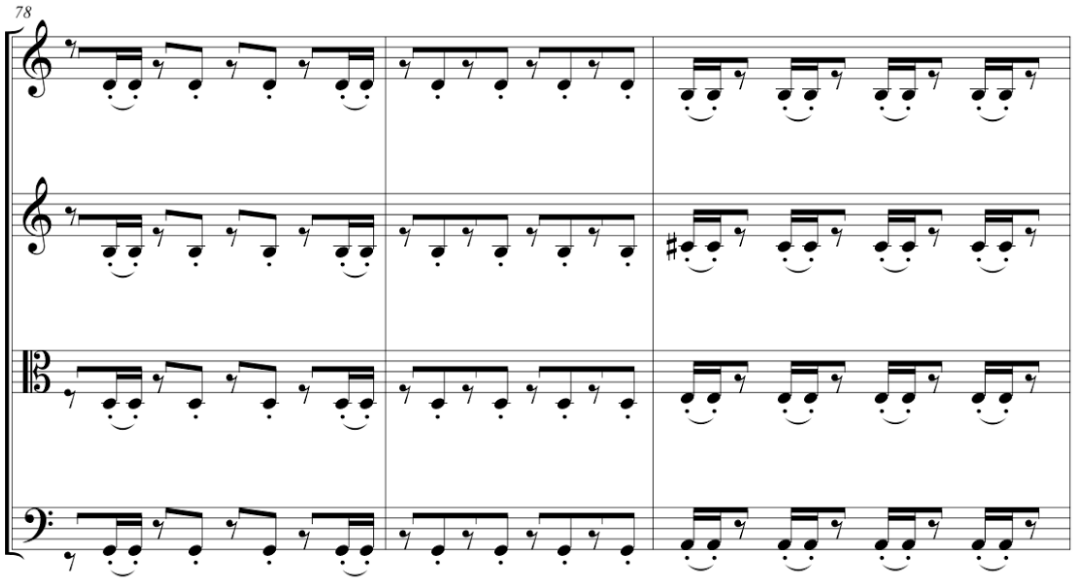

33
pizz.
col legno tratto
molto sul pont
pizz.
pizz.
arco
flautando
ord
38
pizz.
col legno tratto
molto sul pont
pizz.
(simile)
pizz.
flautando
ord
flautando
ord
(simile)
(simile)

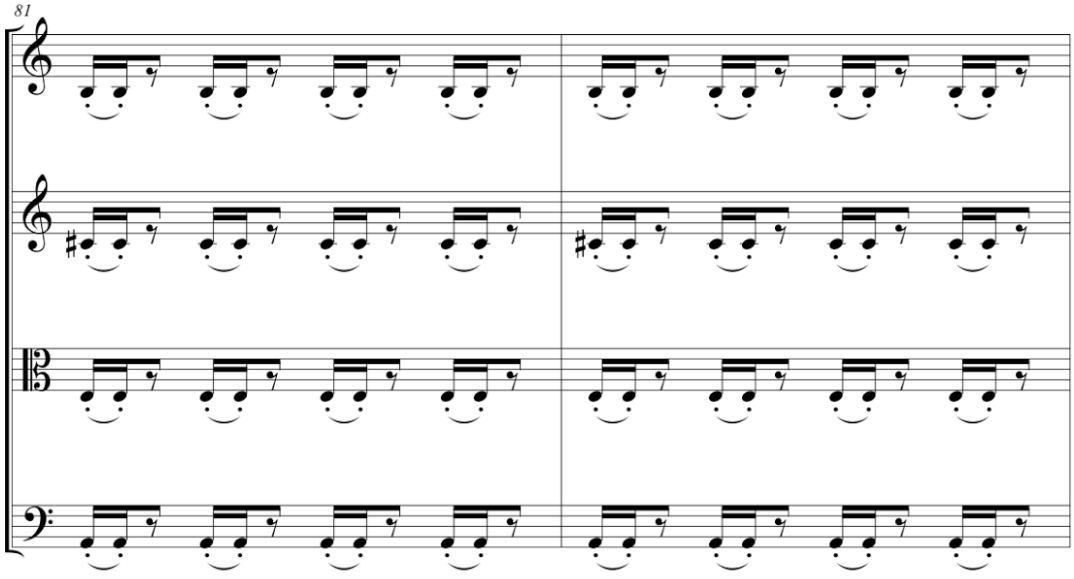

43
col legno battuto
col legno battuto, then
descending free gliss
C
pizz.
col legno tratto
molto sul pont
composite melody
with violin II
pizz.
arco
pizz.
composite melody
with violin I
col legno battuto
arco
(simile)
l.b.

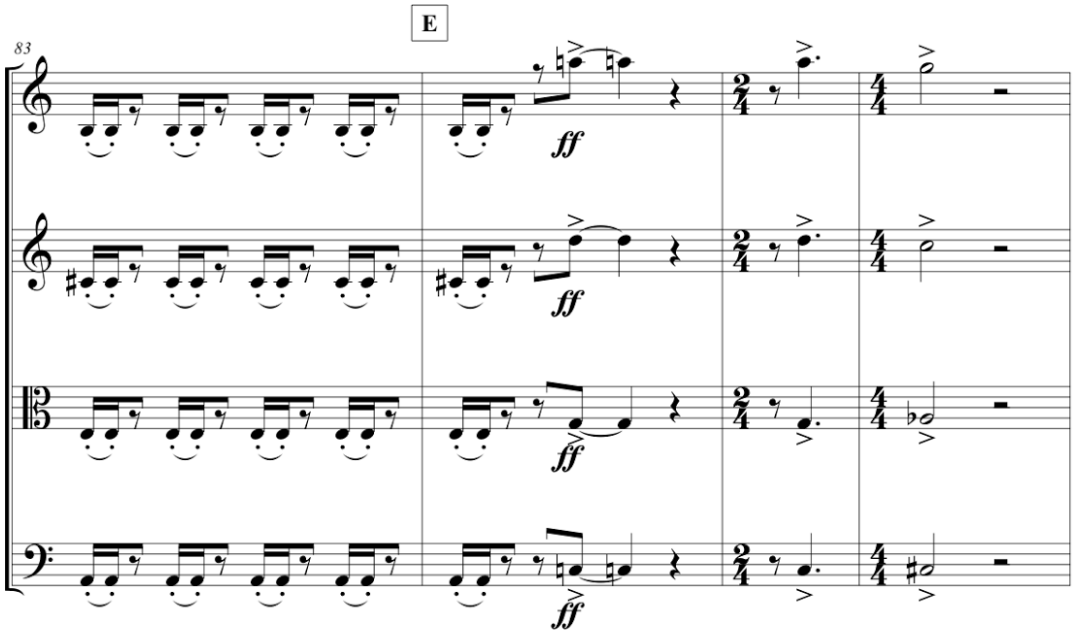

54
pizz.
col legno tratto
molto sul pont
p
f
ff
pp
ff
ff
ff
flautando
ord
ppp
p
58
pizz.
l.t.
m.s.p.
pizz.
l.t.
m.s.p.
pizz.
pp
ff
pp
ff
pizz.
pizz.
ff
ff
pizz.
f
two pitches, both
natural harmonics
on III and II
p
p
p
p

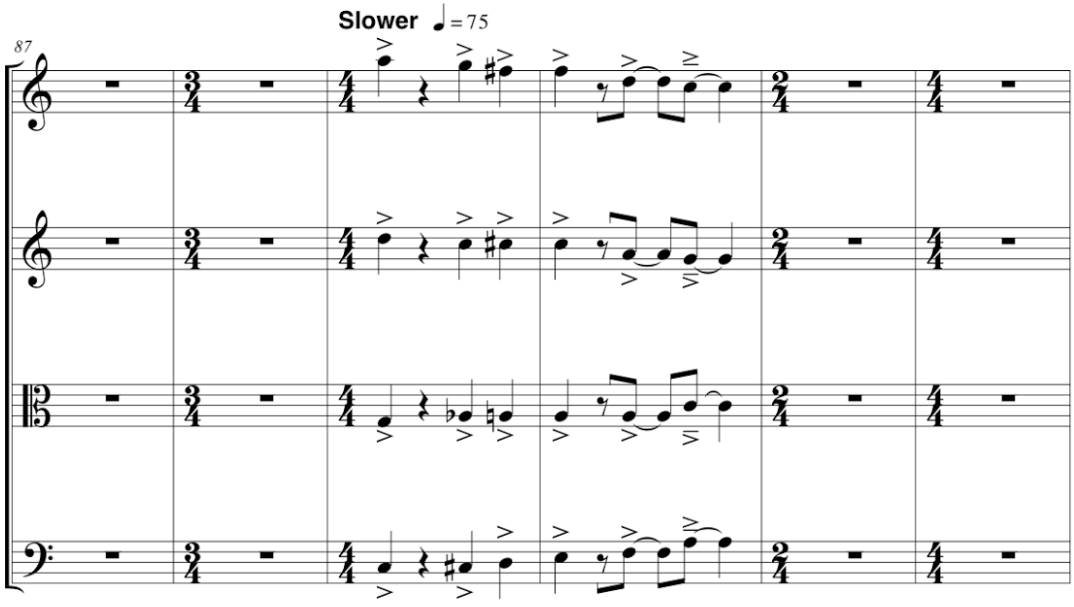

62
pizz.
pizz.
pizz.
ff
l.b.
f
pizz.
l.b.
pizz.
ff
f
ff
pizz.
pizz.
f
ff
f
l.b.
l.b.
f
p
f
p
67
pizz.
l.b.
pizz.
l.b.
l.b.
f
f
f
pizz.
ff
f
l.b.
l.b.
f
p
f
f


D
(♩ = ♩)
arco
p
arco
p
arco
p
arco
p
75


78

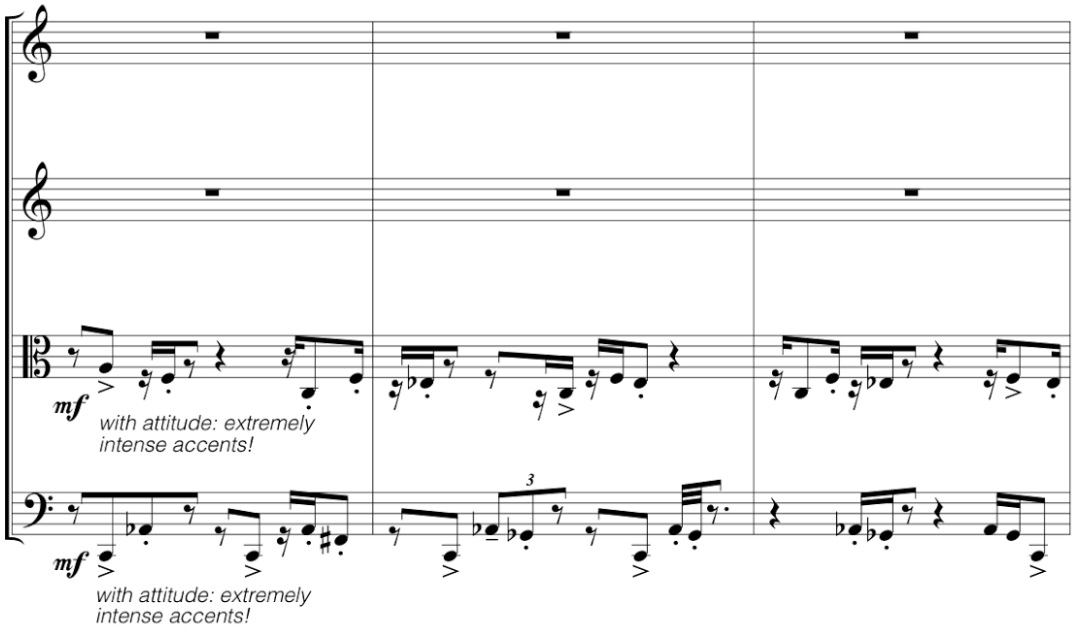

81

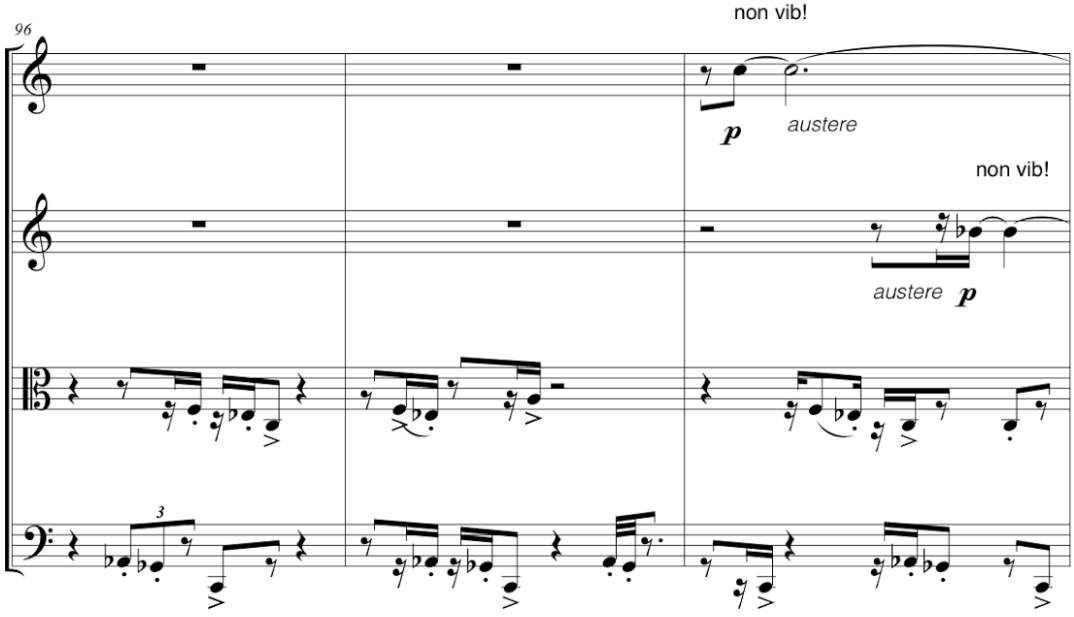

E
83
ff
ff
ff
ff

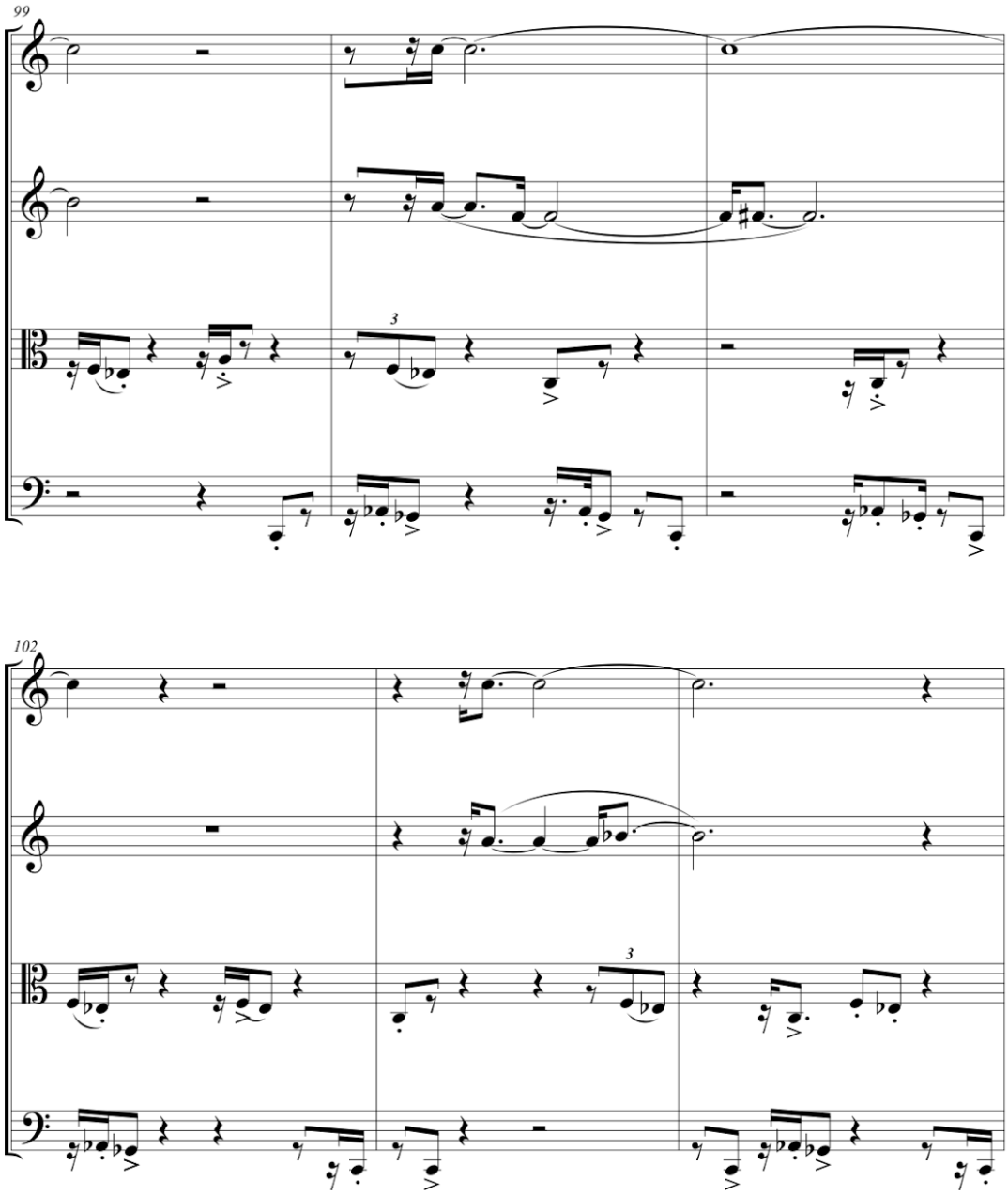

Slower
= 75
87

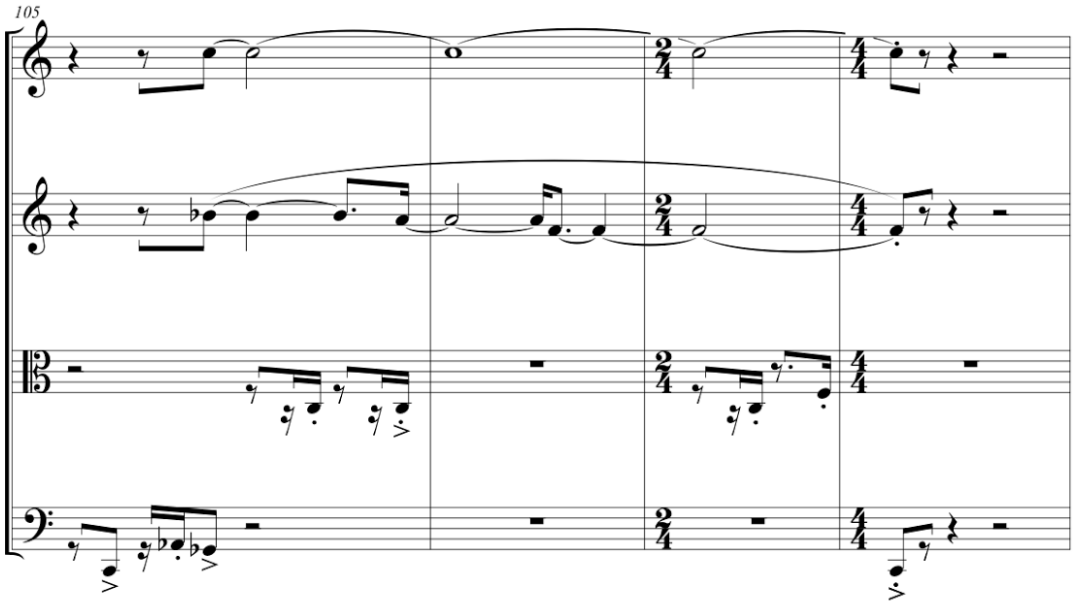
F

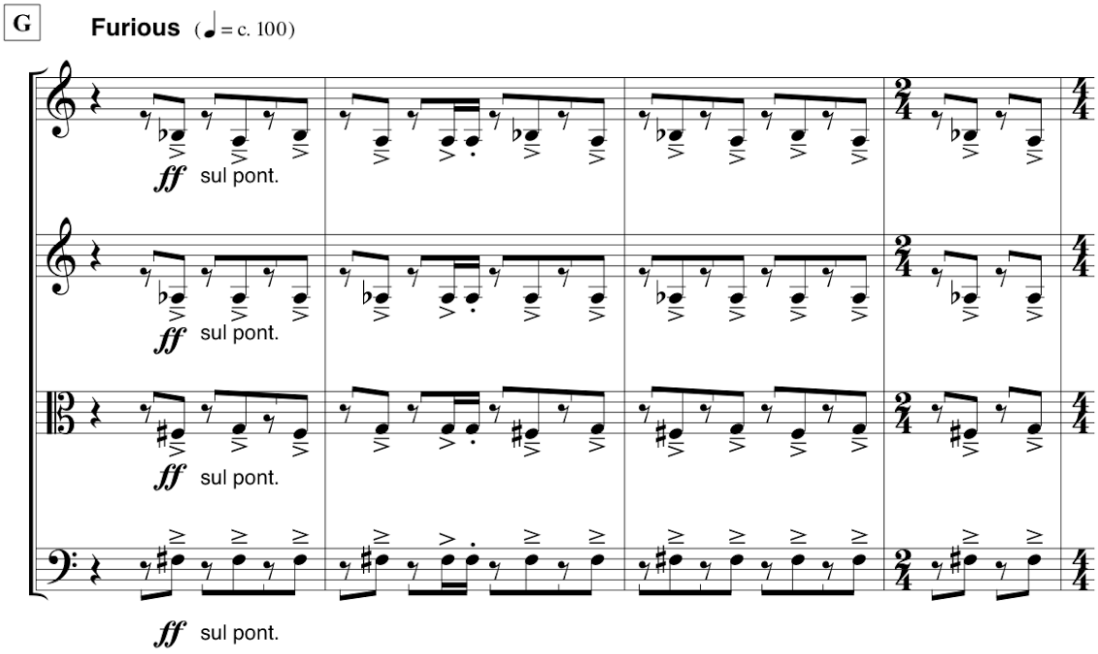
Poco più mosso ♩ = 80



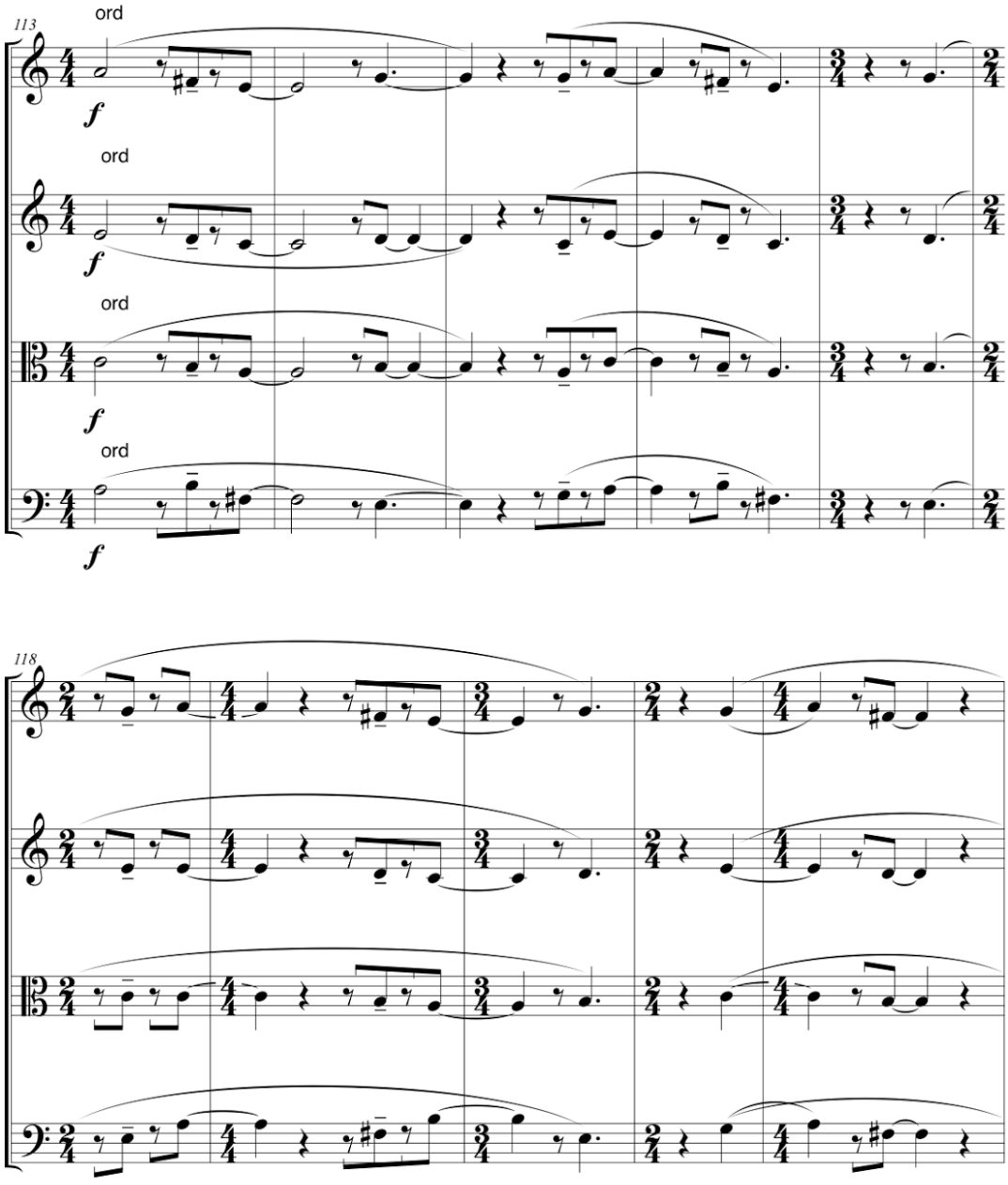


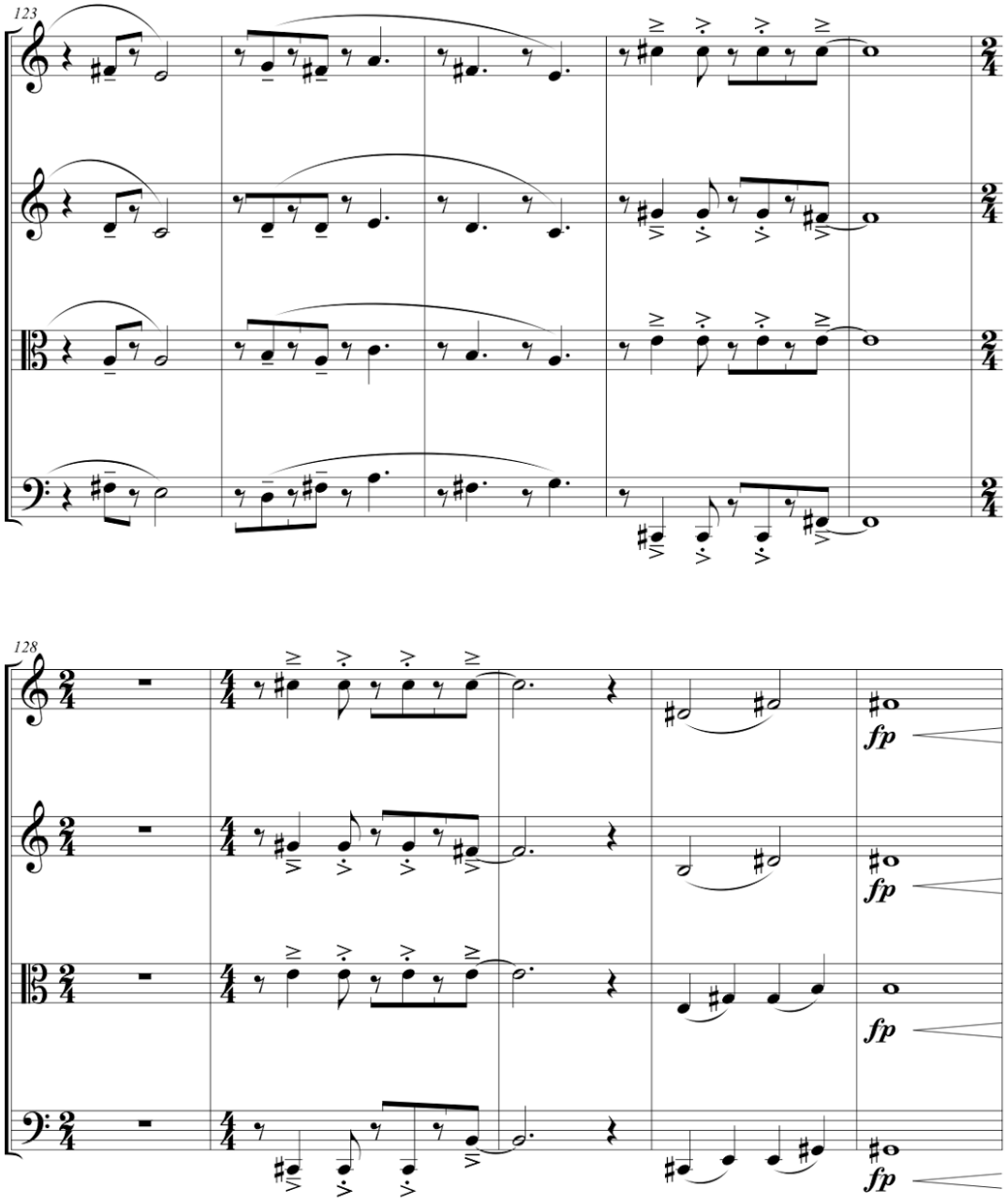

99
3
102
3

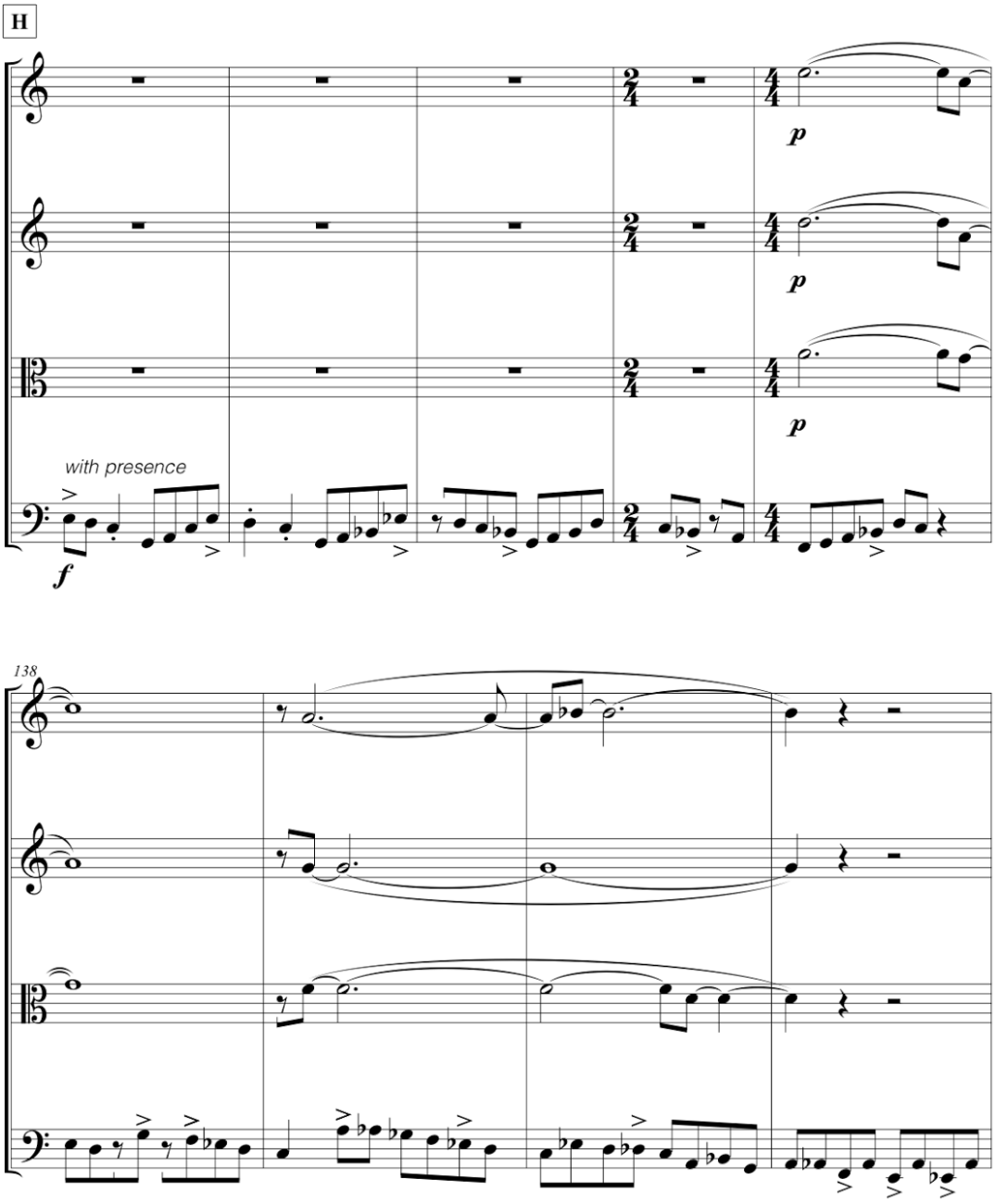

105

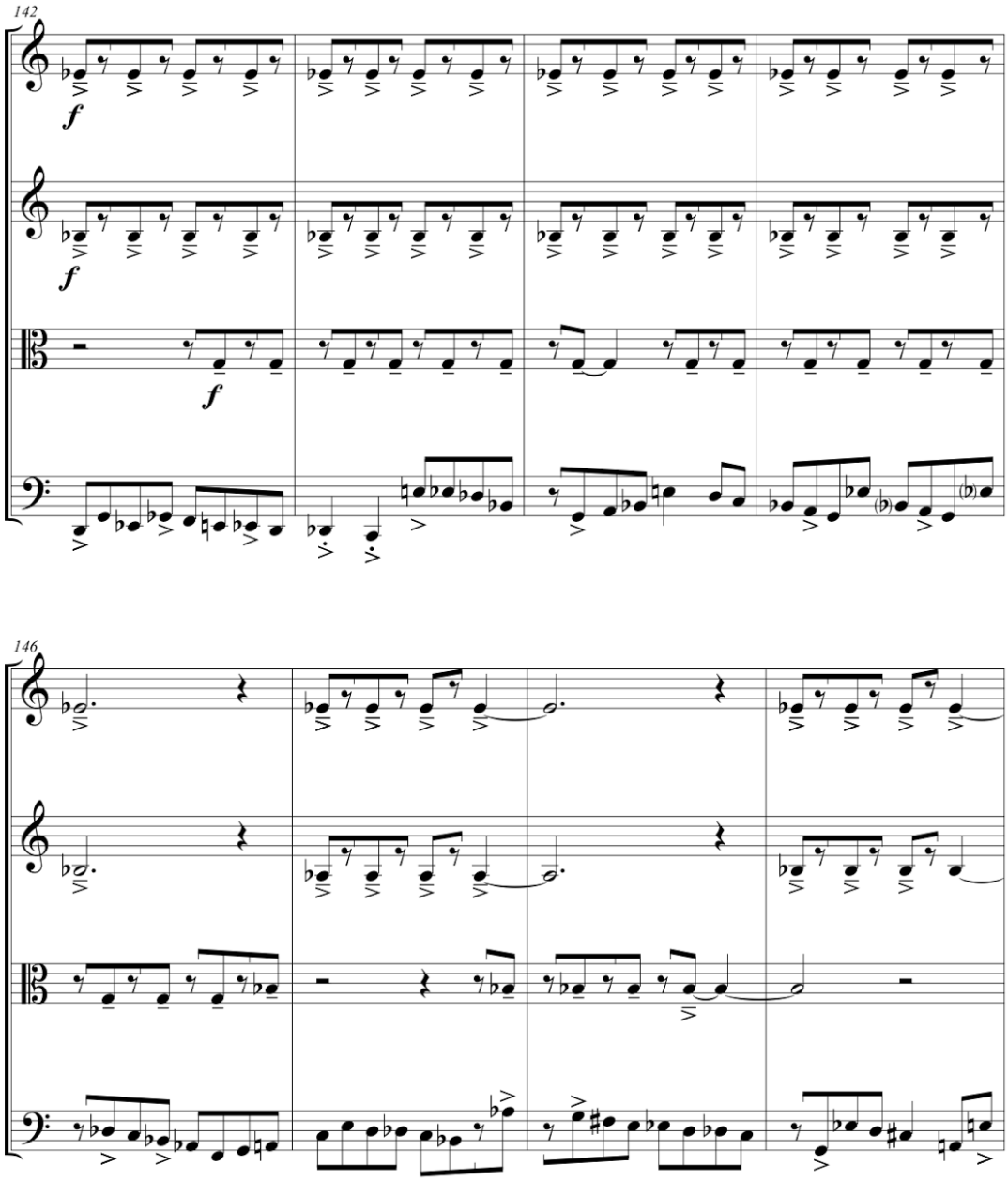

G
Furious (♩= c. 100)
ff sul pont.
ff sul pont.
ff sul pont.
ff sul pont.

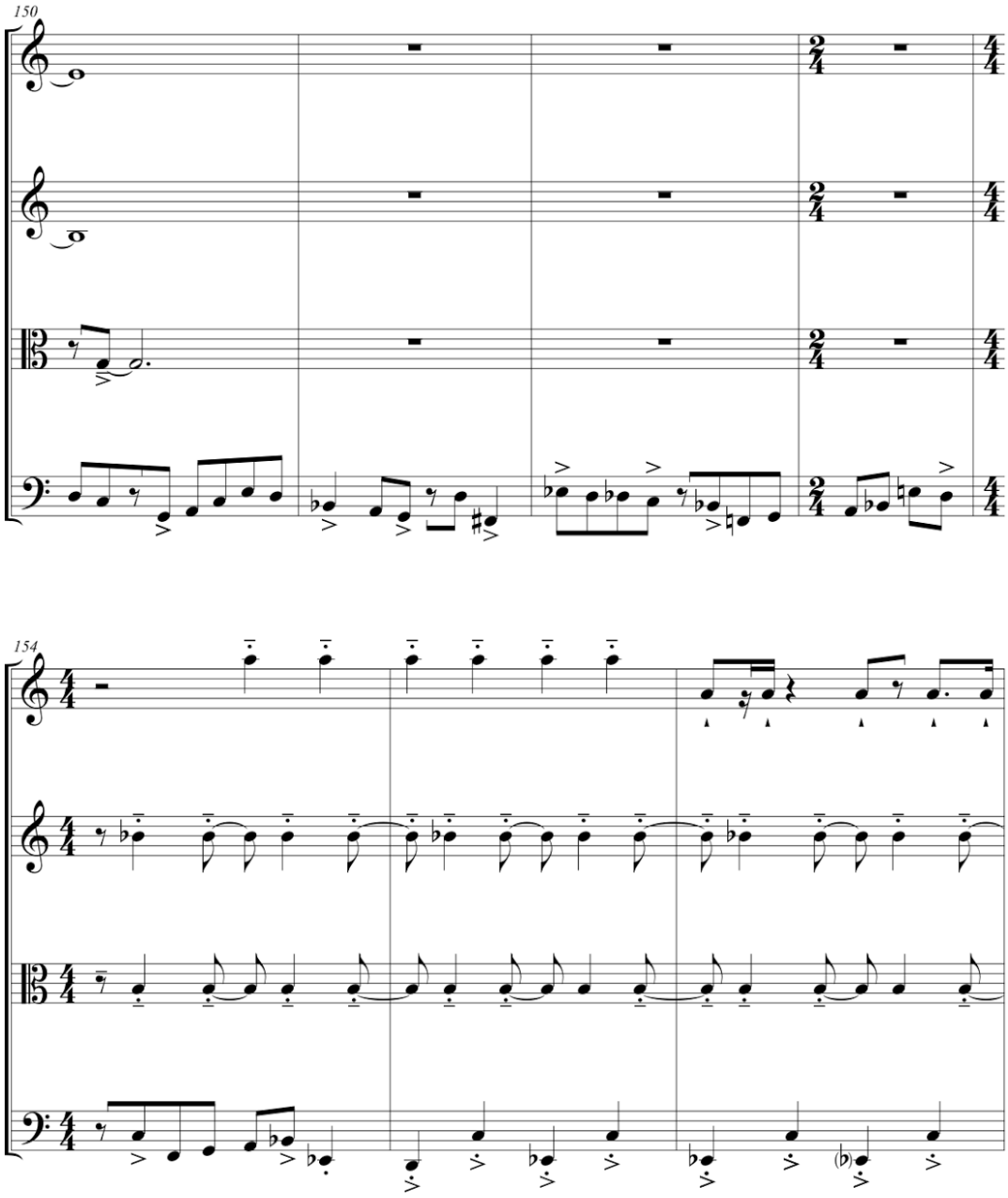
Indie-rock, Debussy

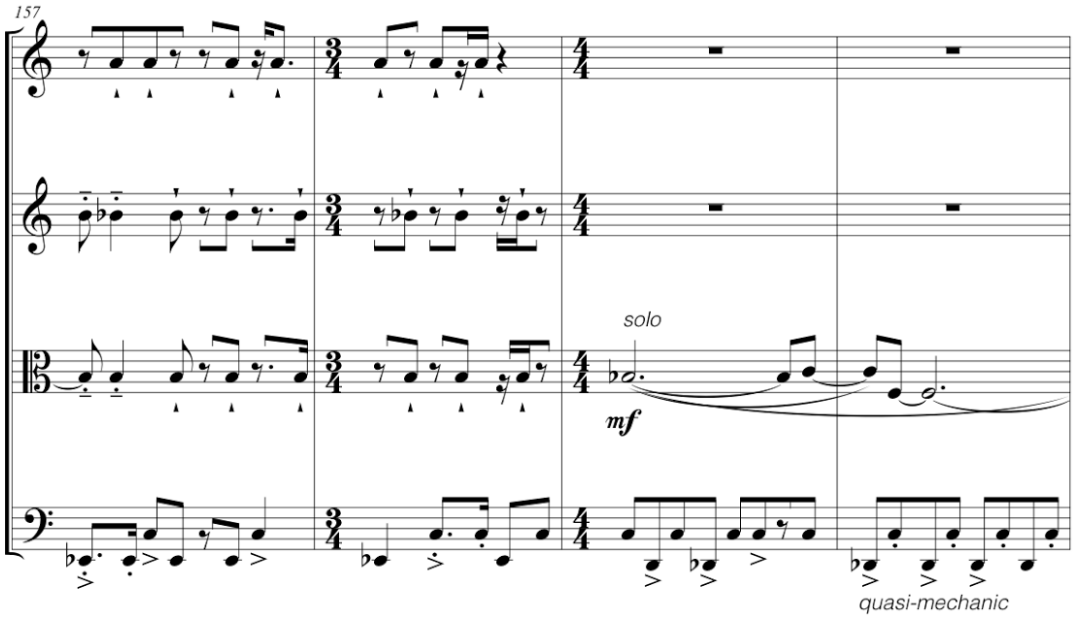



123
128
fp
fp
fp
fp

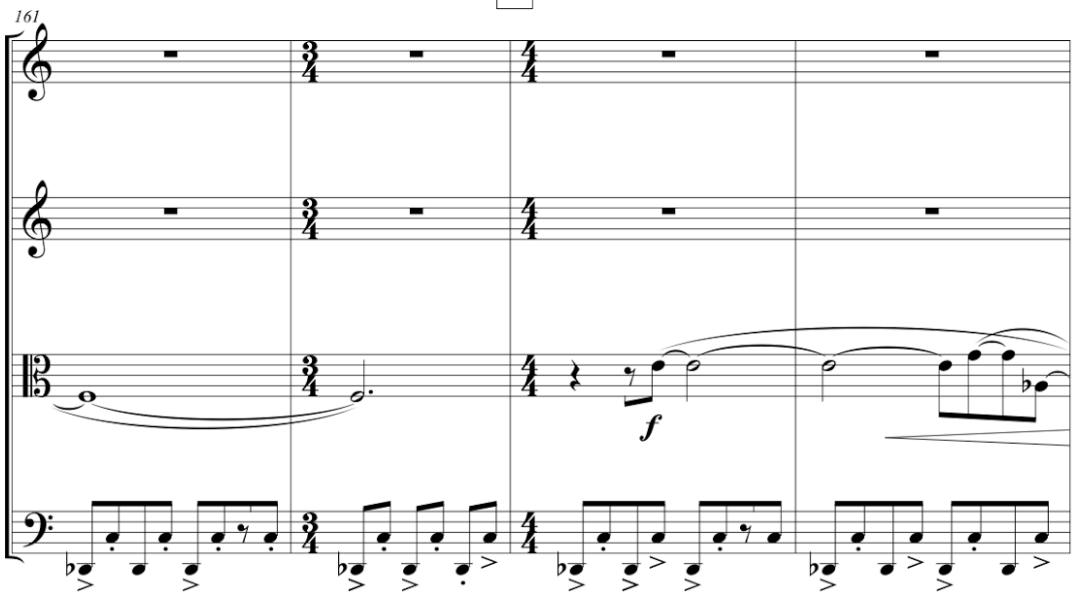

H
p
p
p
with presence
f
138

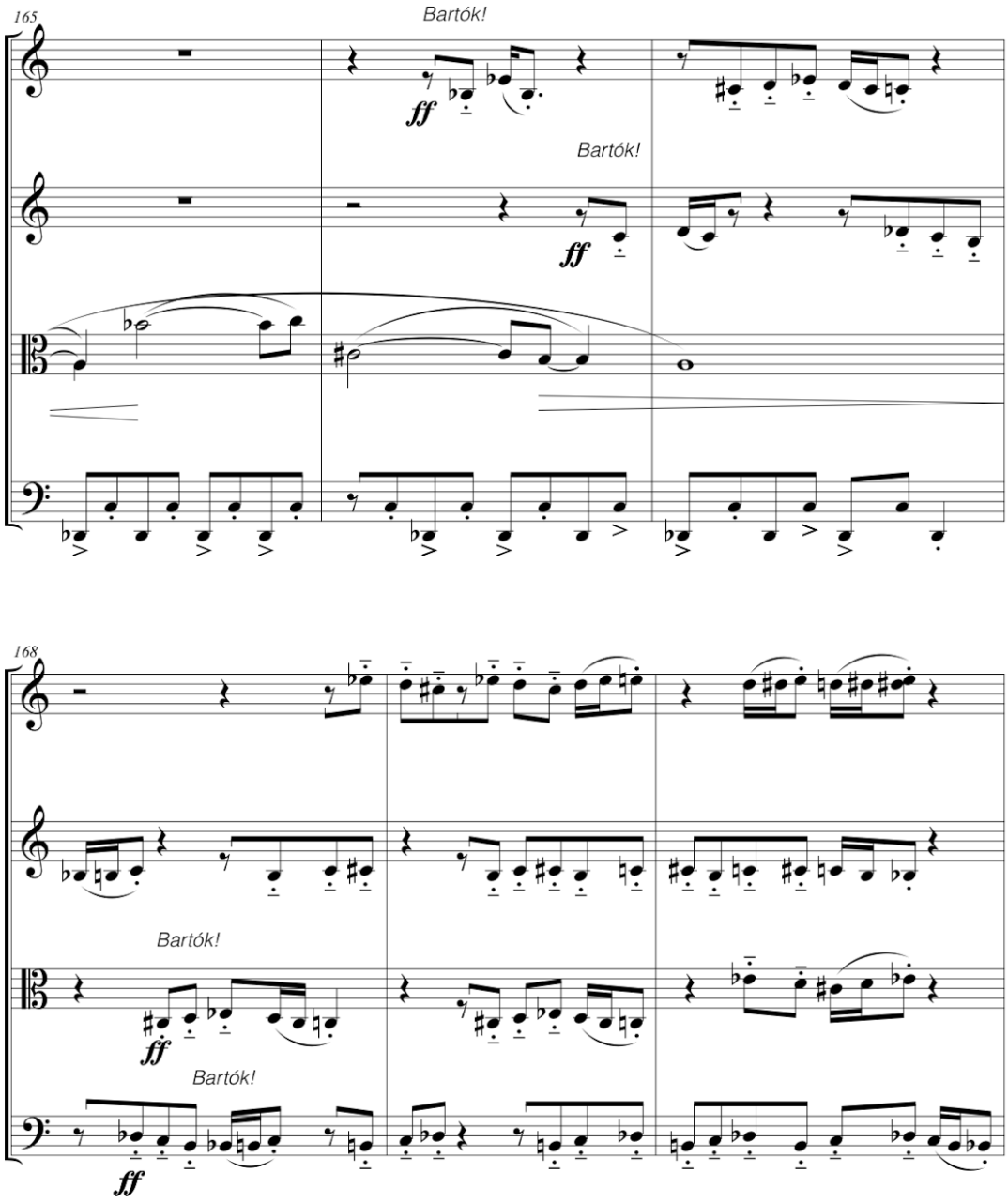

142
f
f
f
146

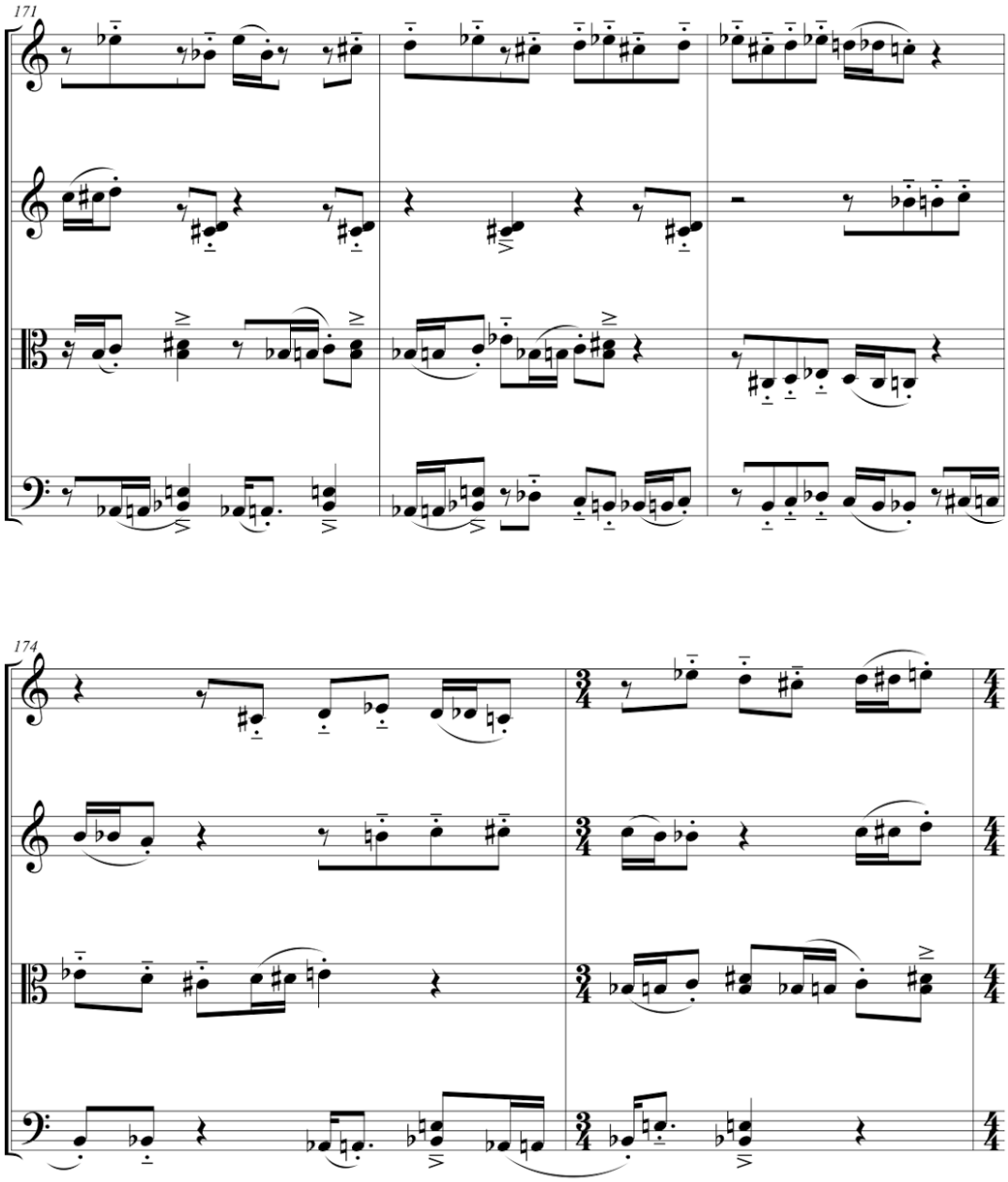

150
154

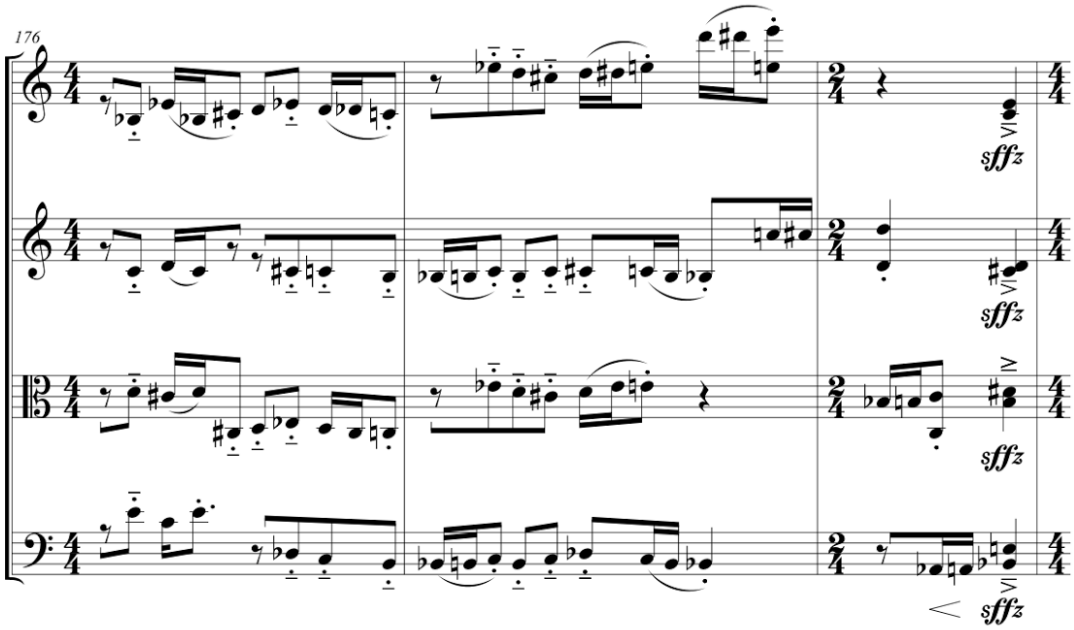


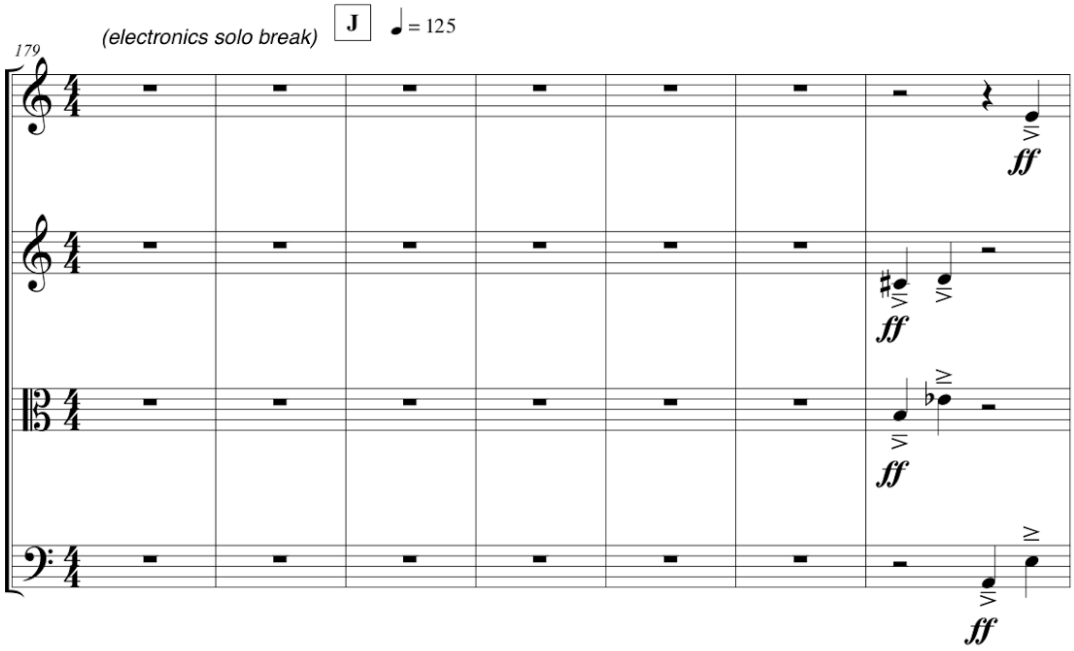
I

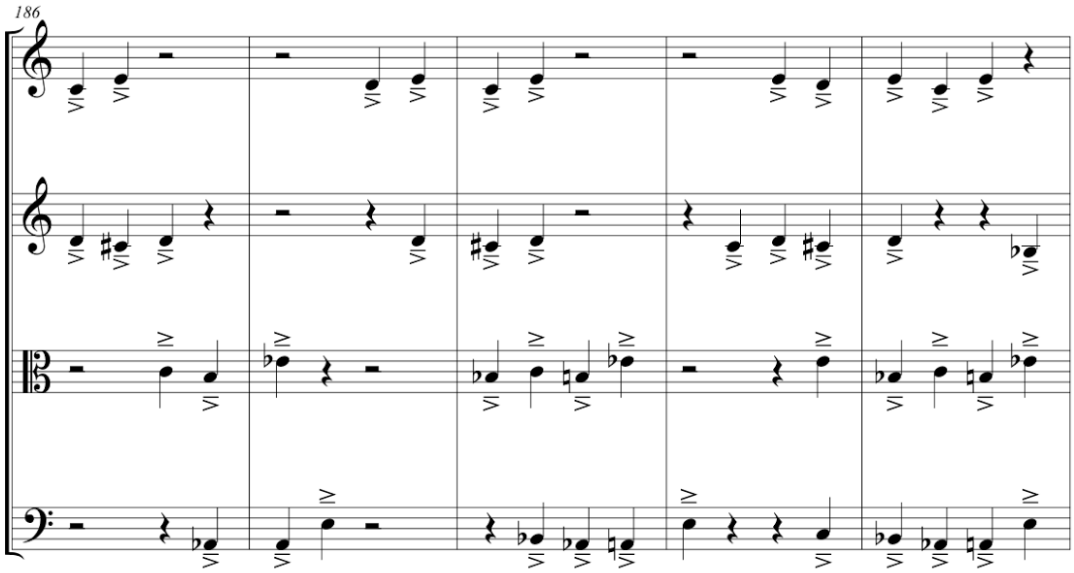


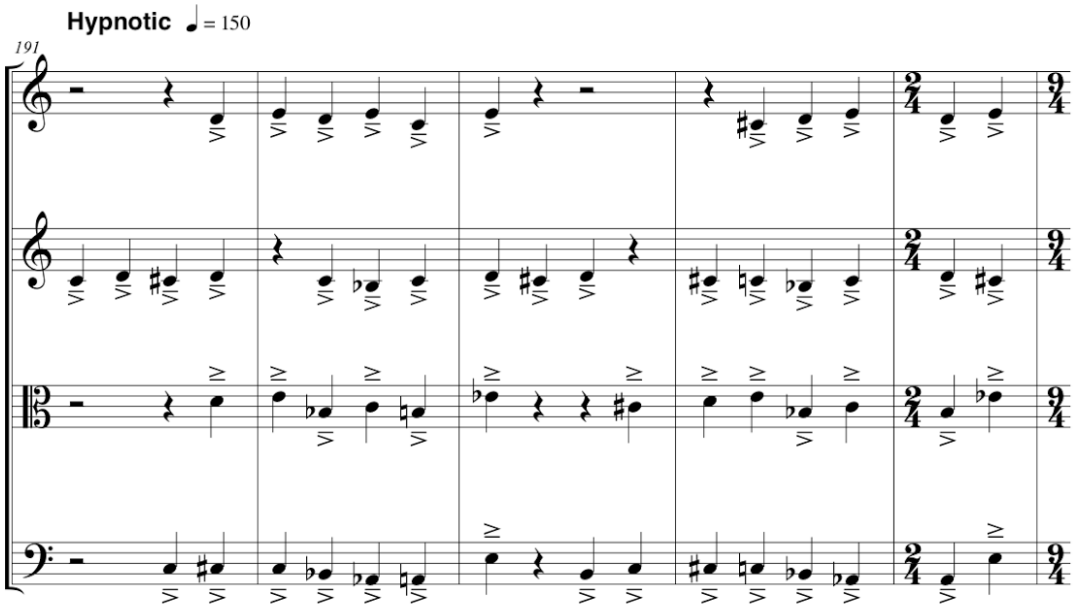

165
Bartók!
ff
Bartók!
ff
168
Bartók!
ff
Bartók!
ff

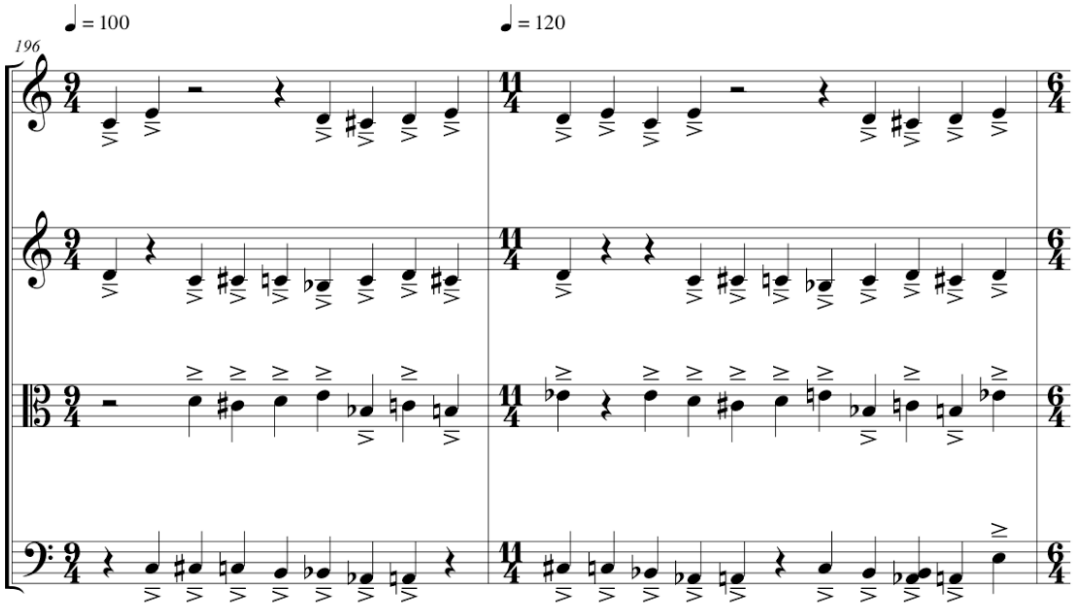

171
174

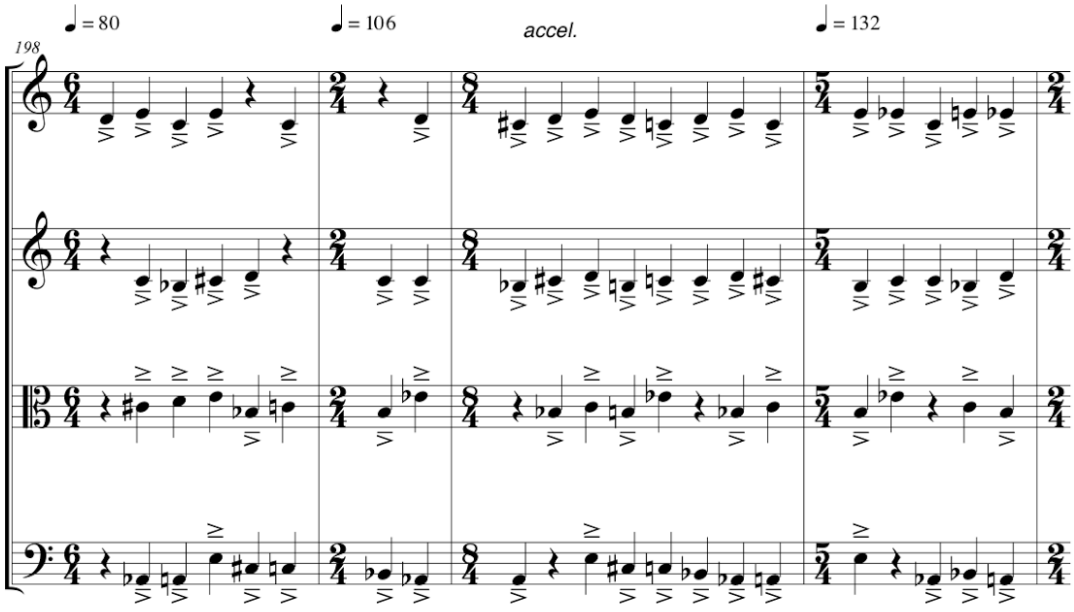

176
sffz
sffz
sffz
sffz

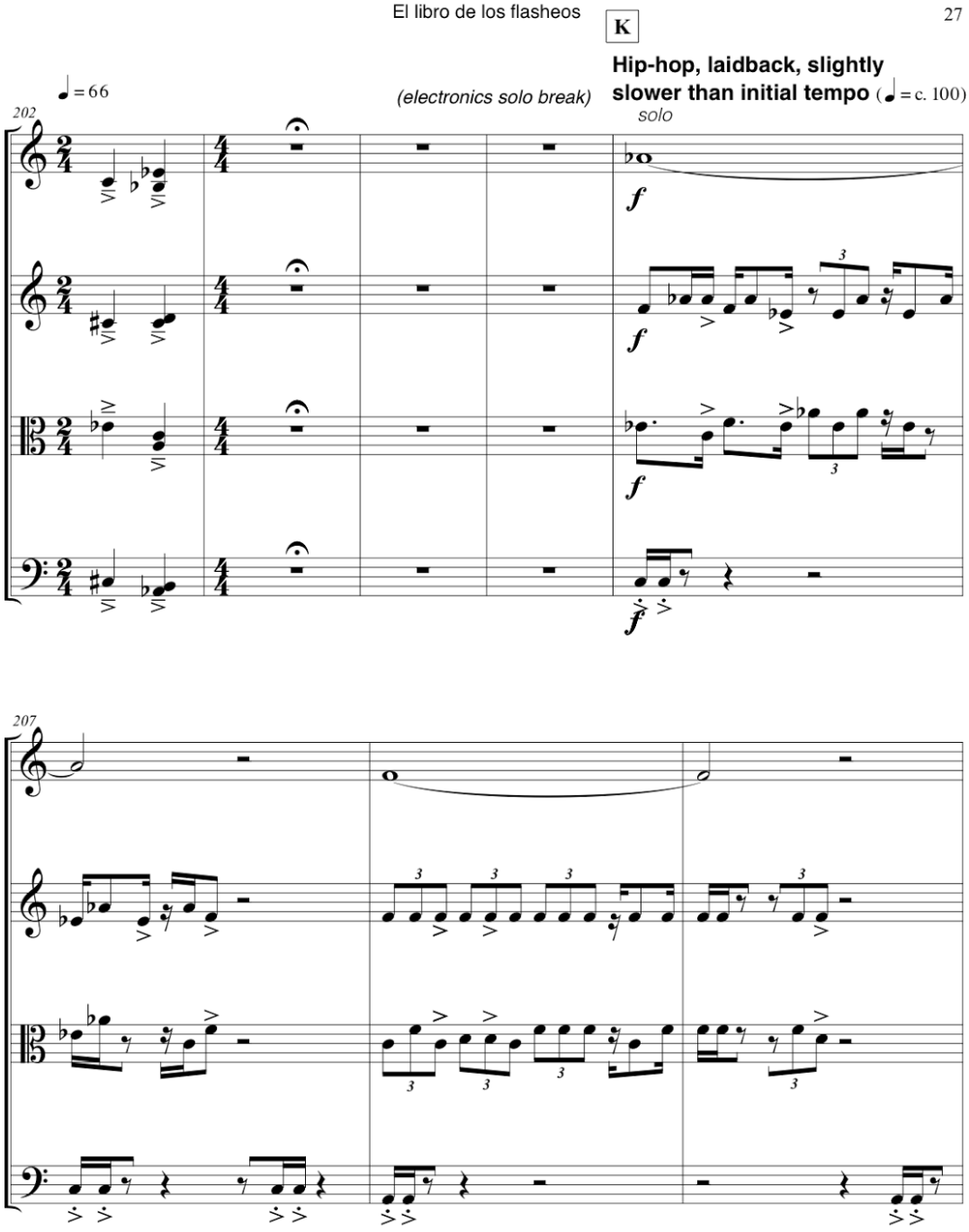

(electronics solo break)
J
= 125
179
ff
ff
ff
ff

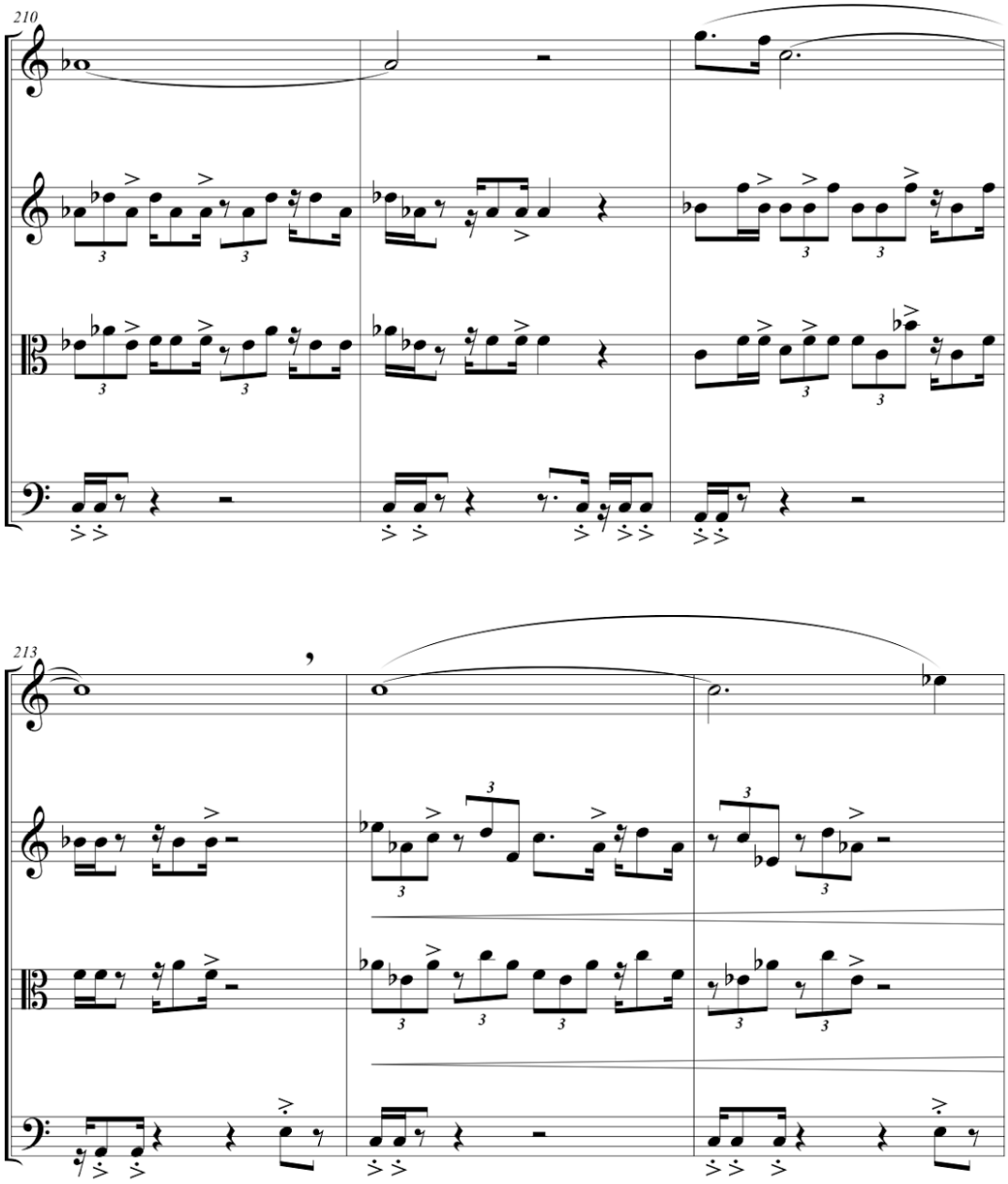

186

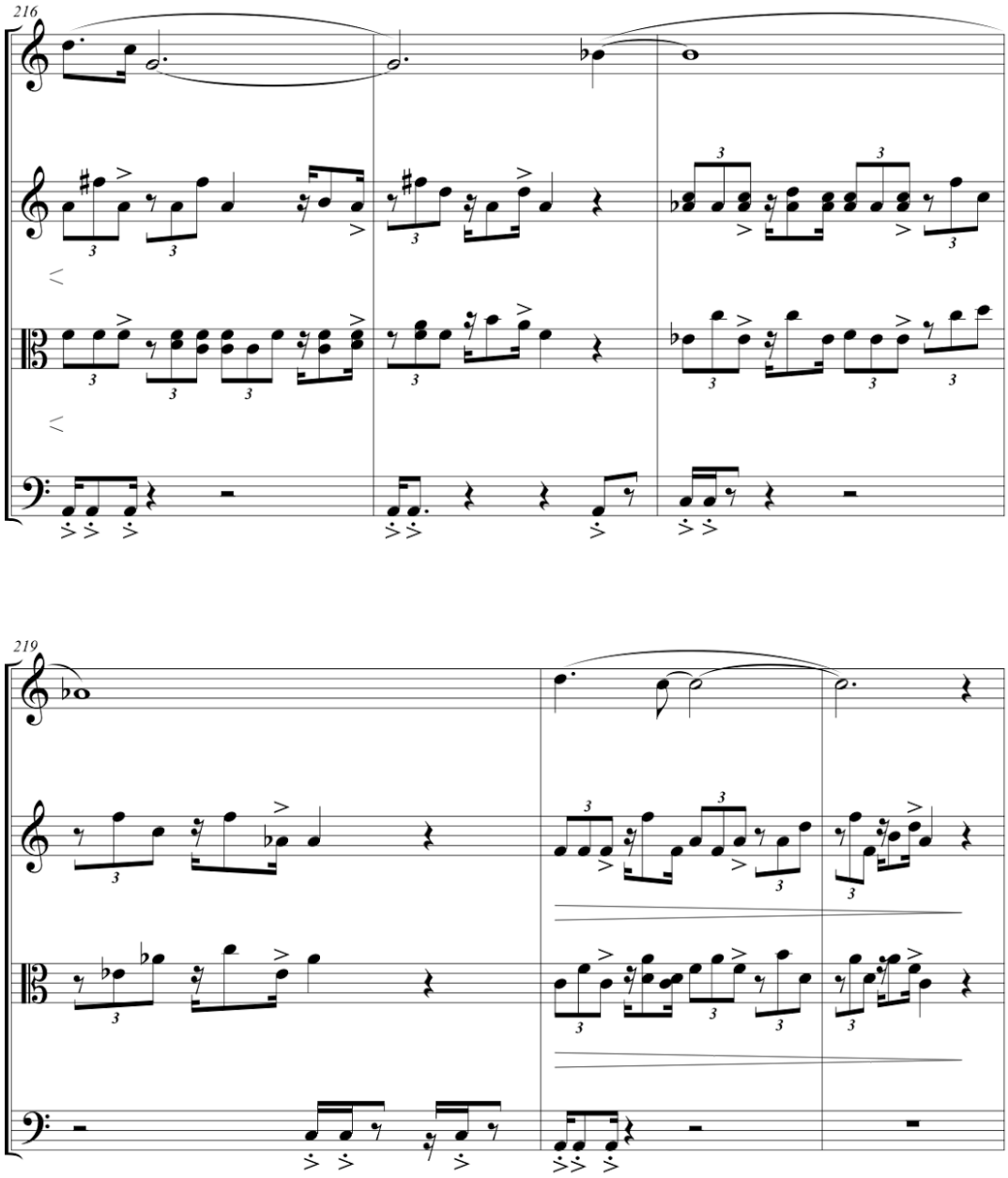

Hypnotic ♩ = 150
191

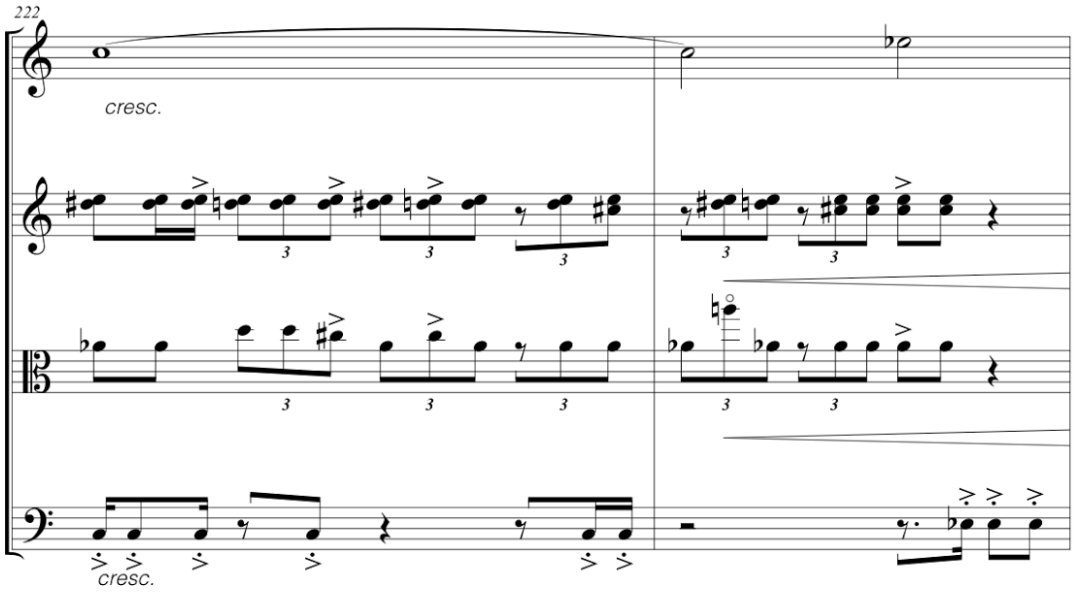

♩ = 100
196
♩ = 120

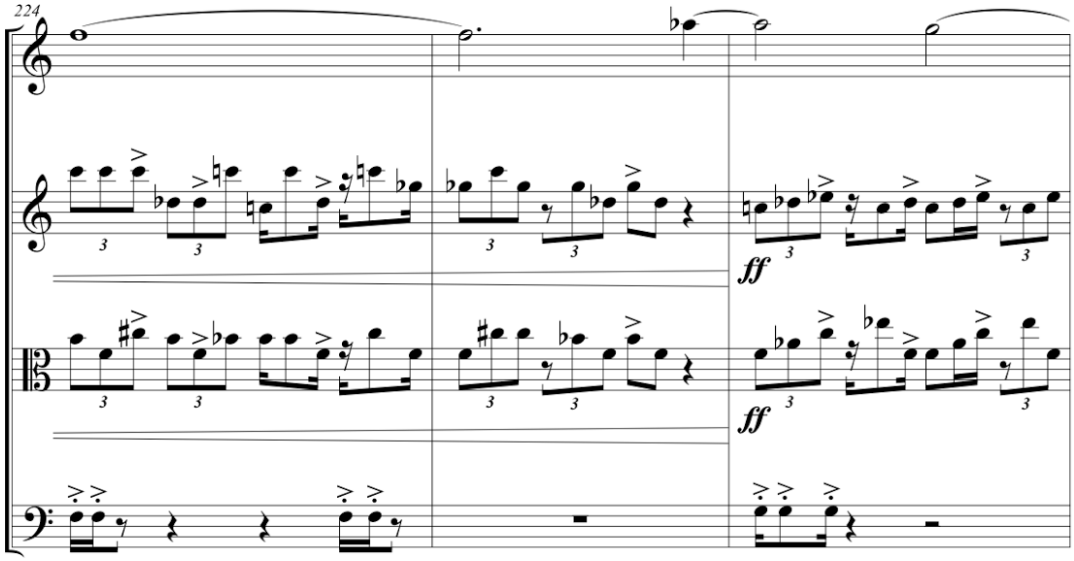

♩ = 80
198
♩ = 106
accel.
♩ = 132

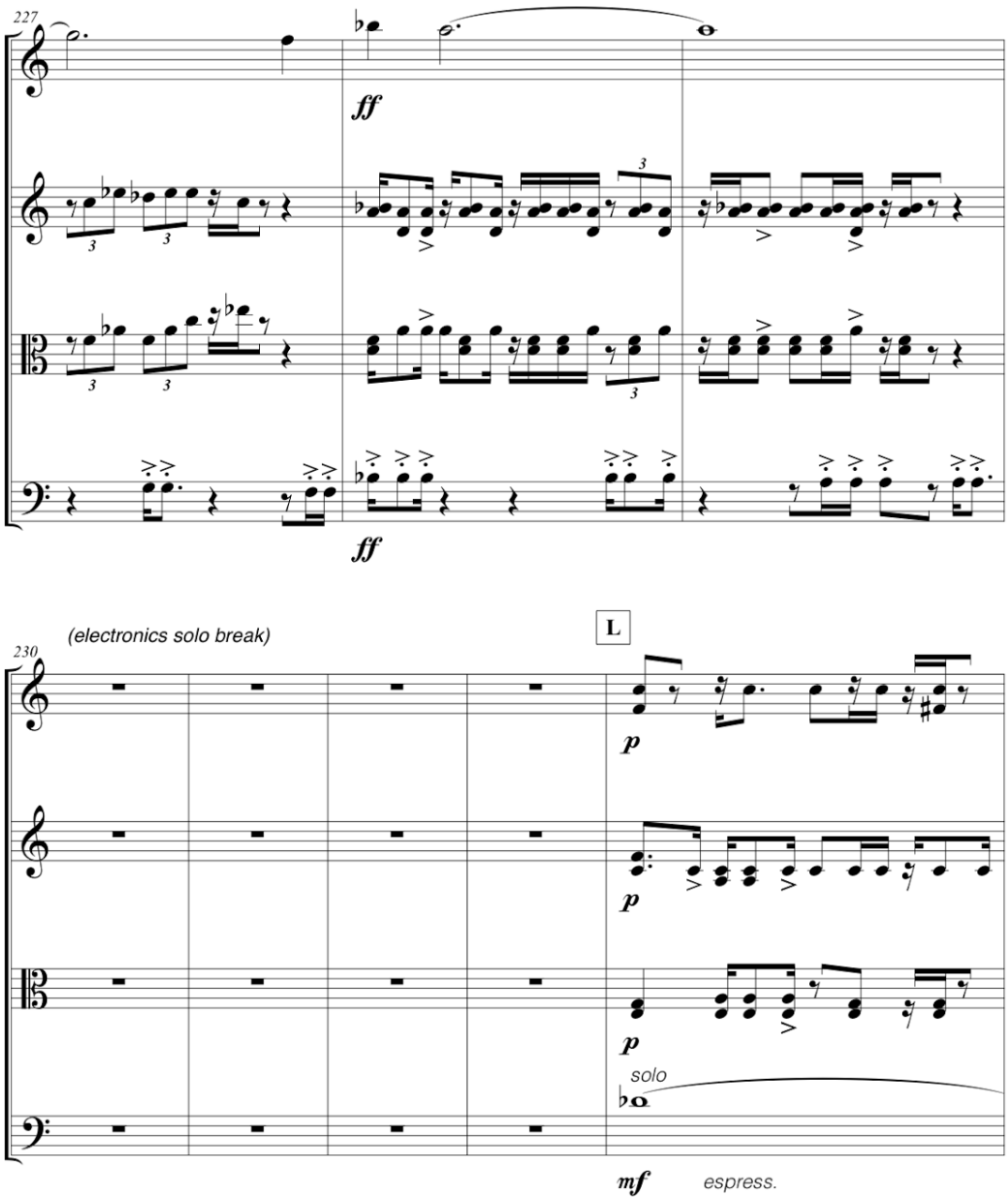

K
Hip-hop, laidback, slightly slower than initial tempo (♩ = c. 100)
♩ = 66
(electronics solo break)
solo
202
207

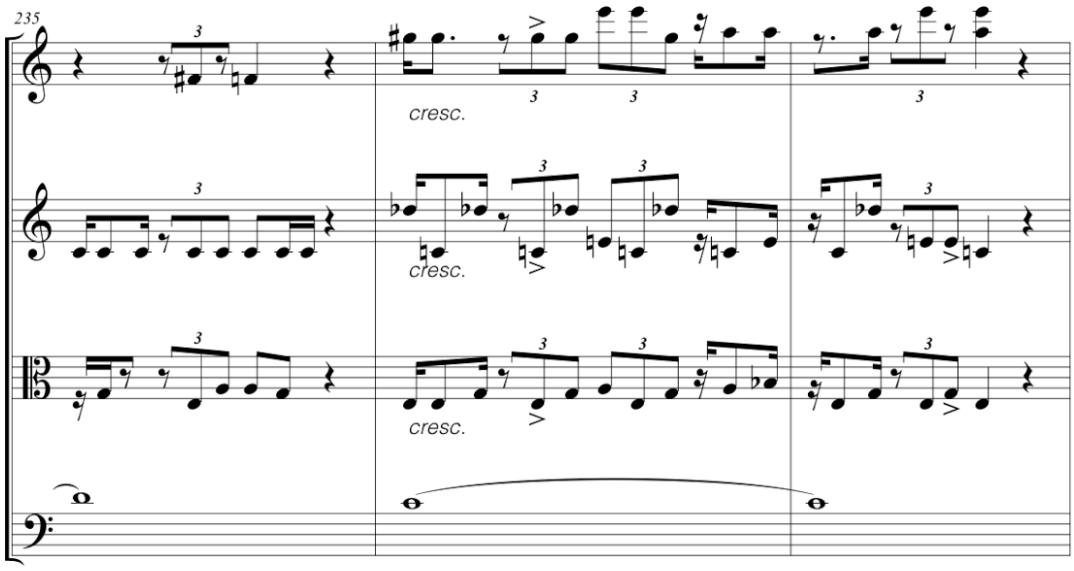

210
213

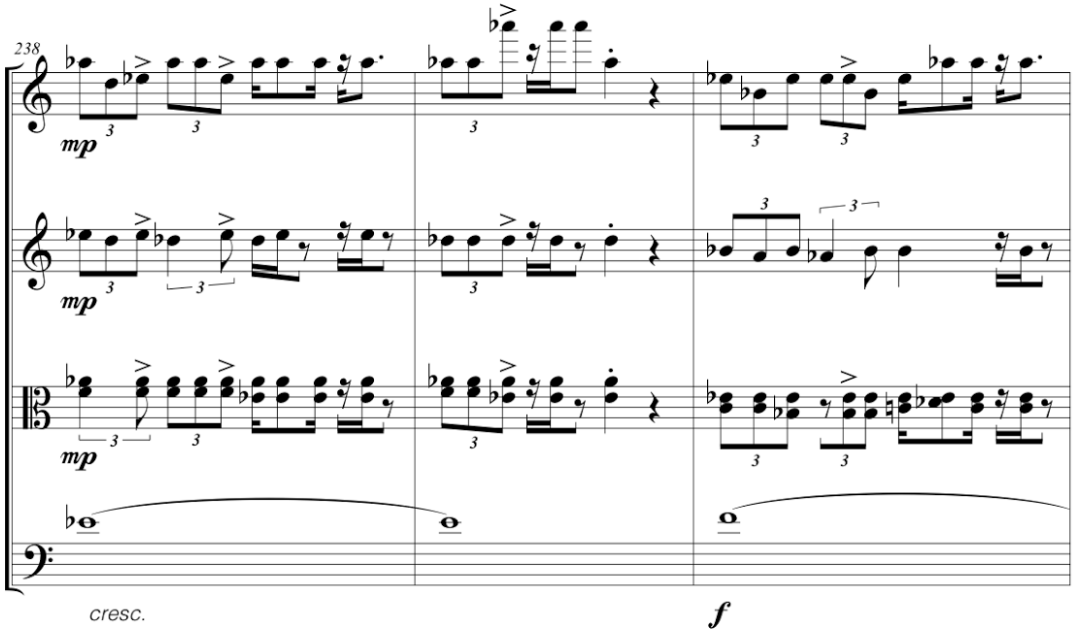

216
219

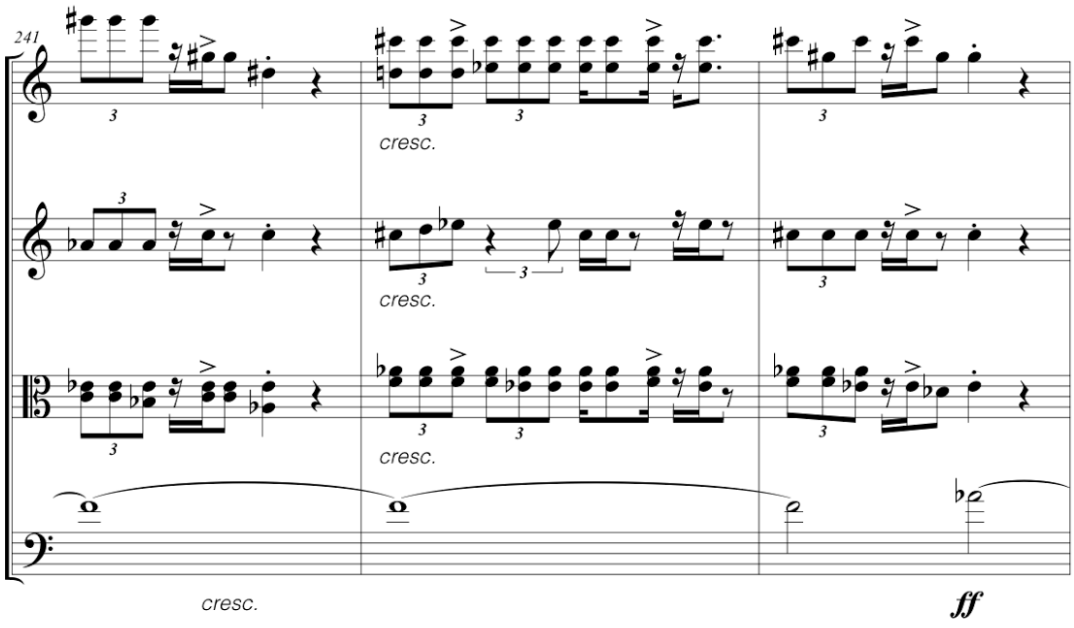

222
cresc.
cresc.

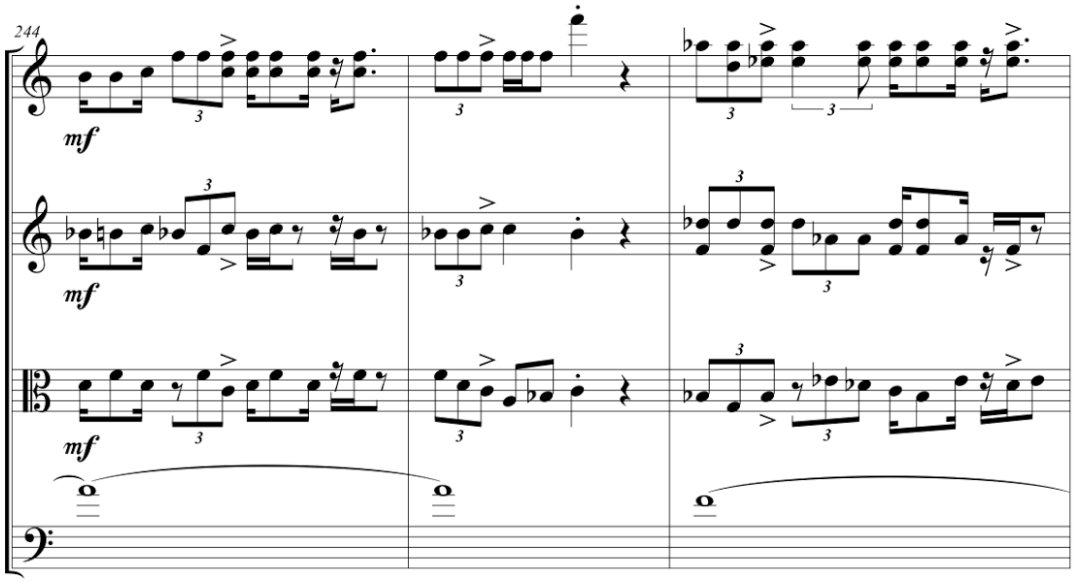

224
ff
ff

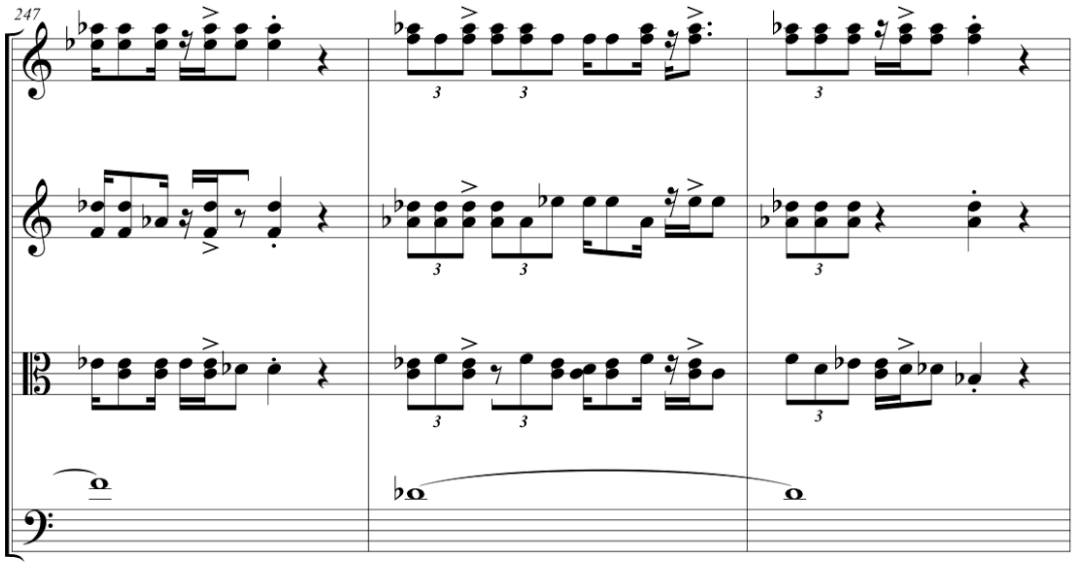

227
ff
ff
(electronics solo break)
230
L
p
p
p
solo
mf
espress.

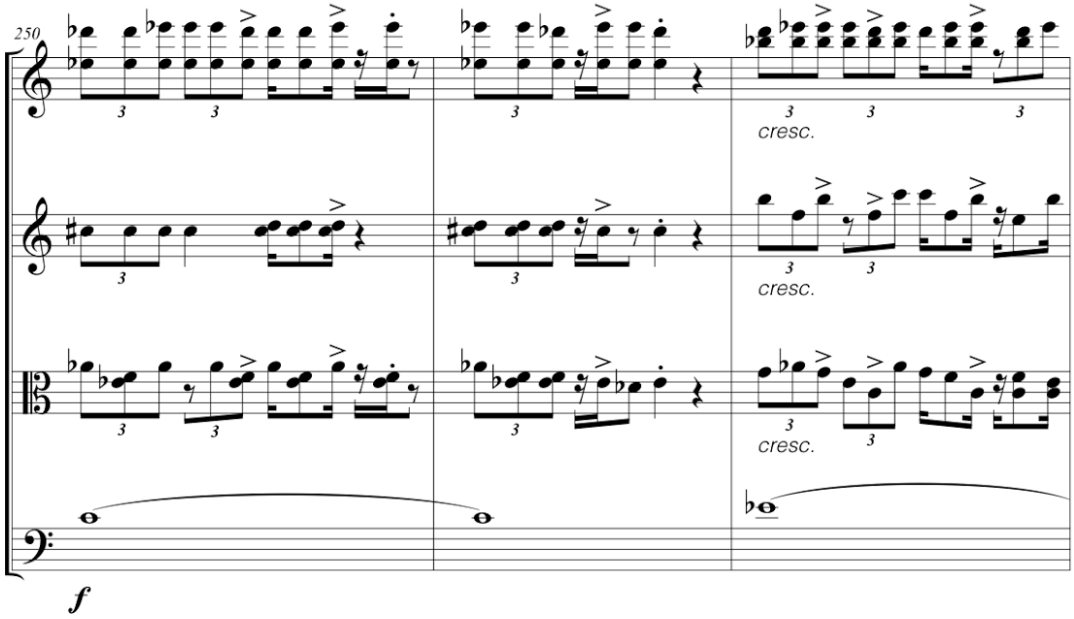

235
cresc.
cresc.
cresc.

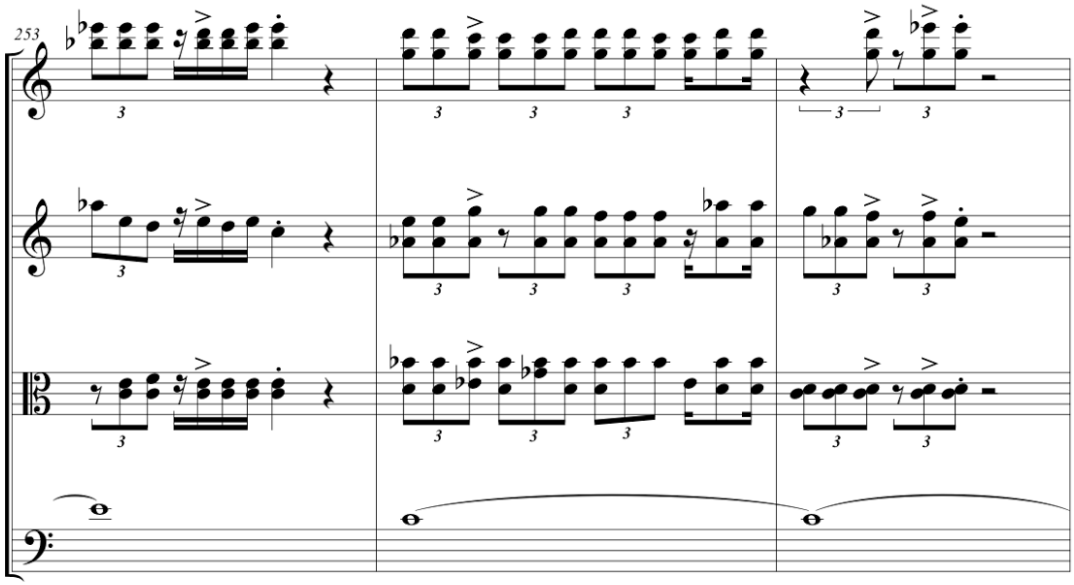

238
mp
mp
mp
cresc.
f

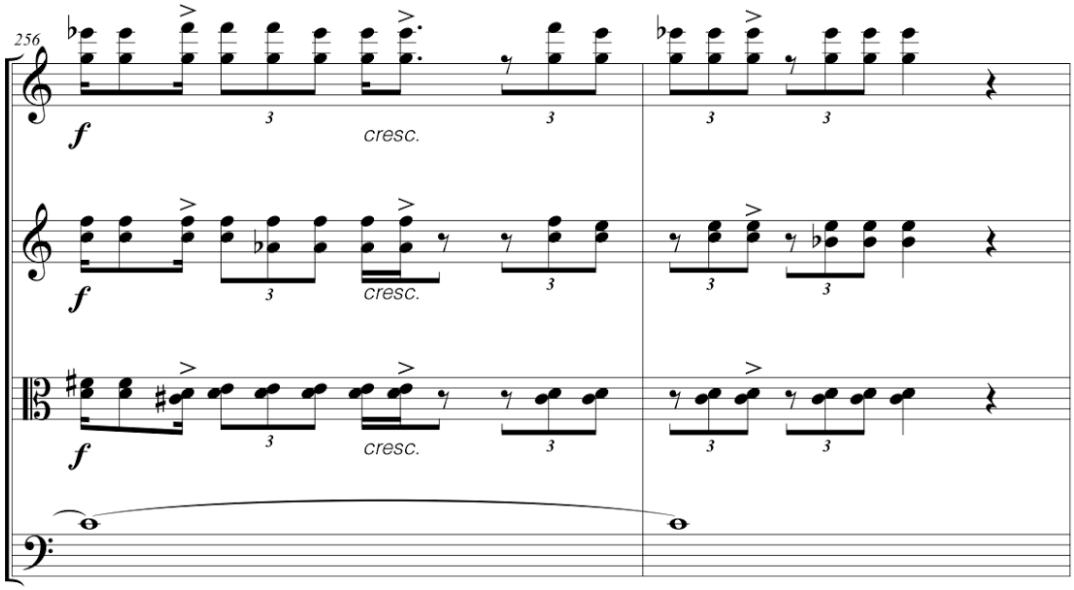

241
cresc.
cresc.
cresc.
cresc.
ff

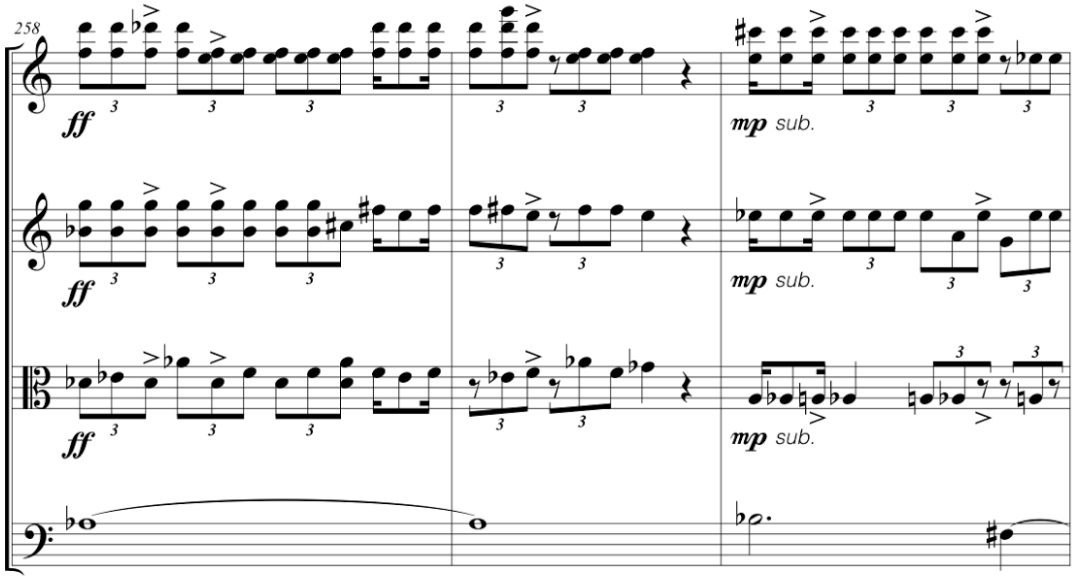

244
mf
mf
mf

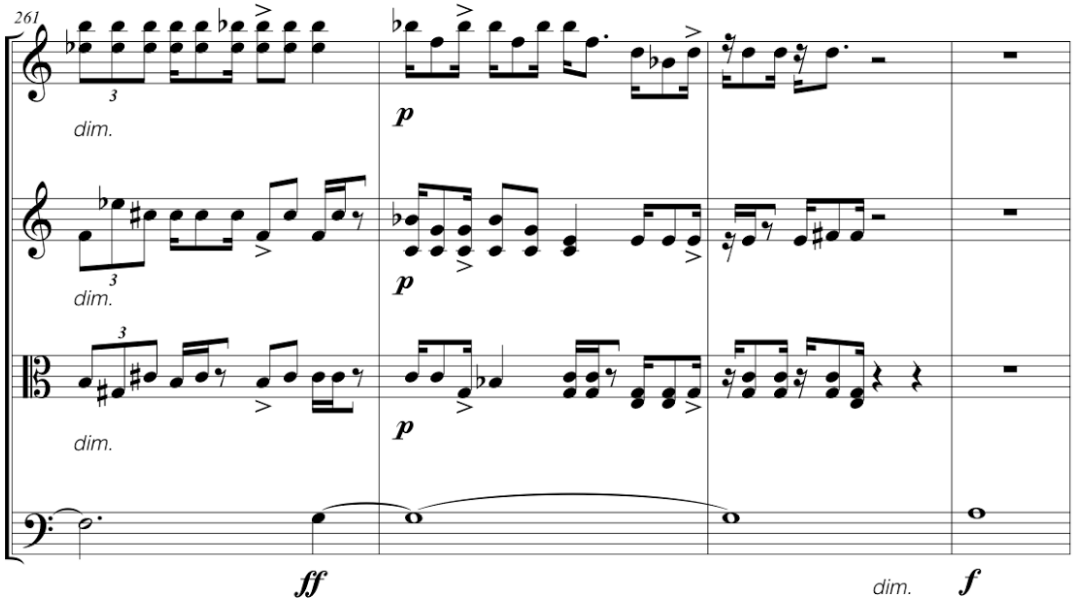

247
dim.

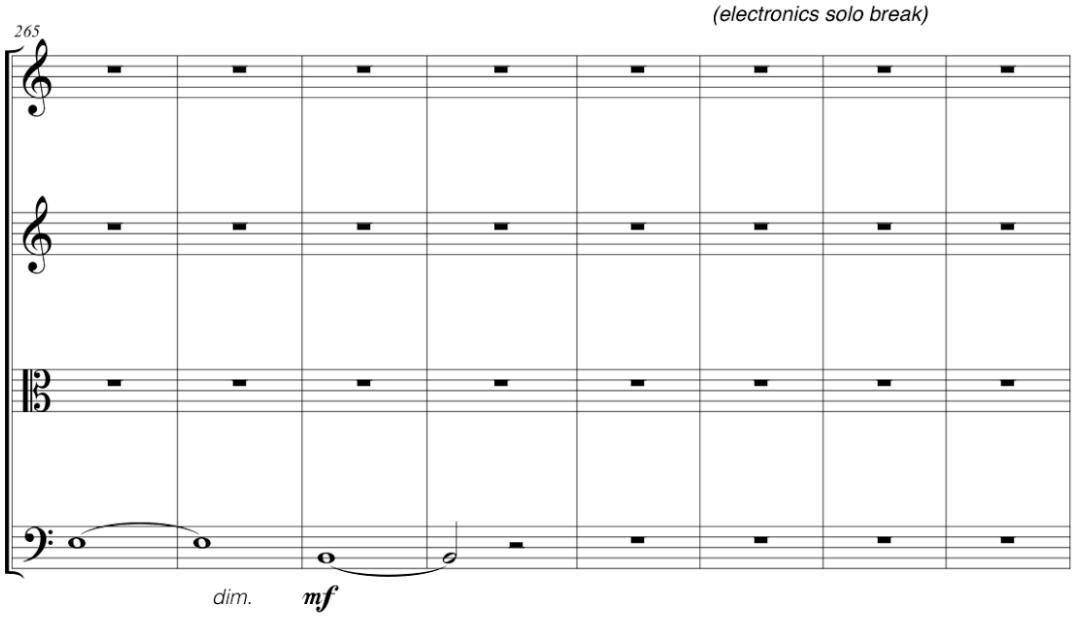

250
cresc.
cresc.
cresc.
f

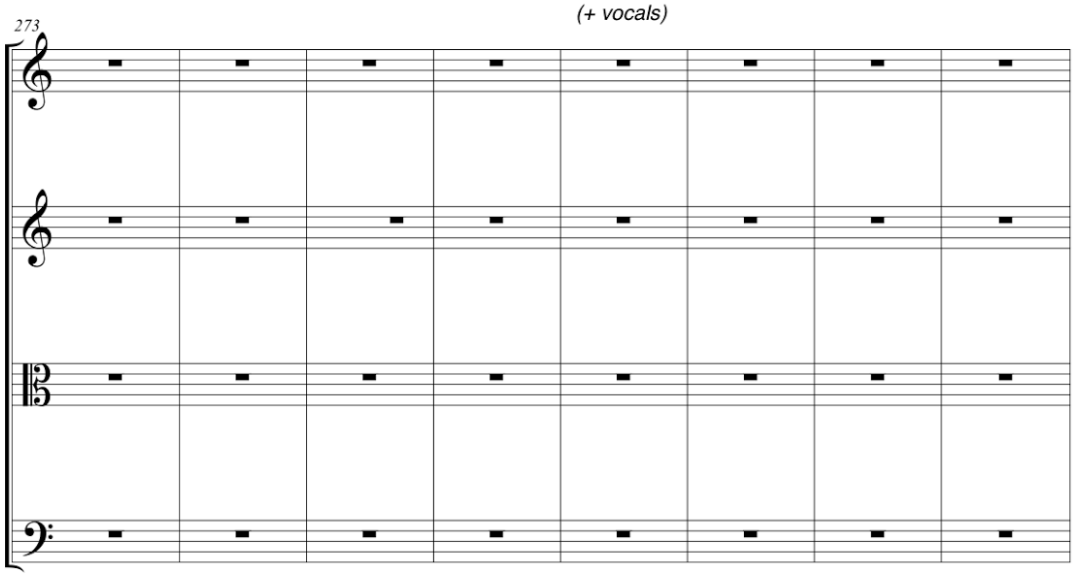

253

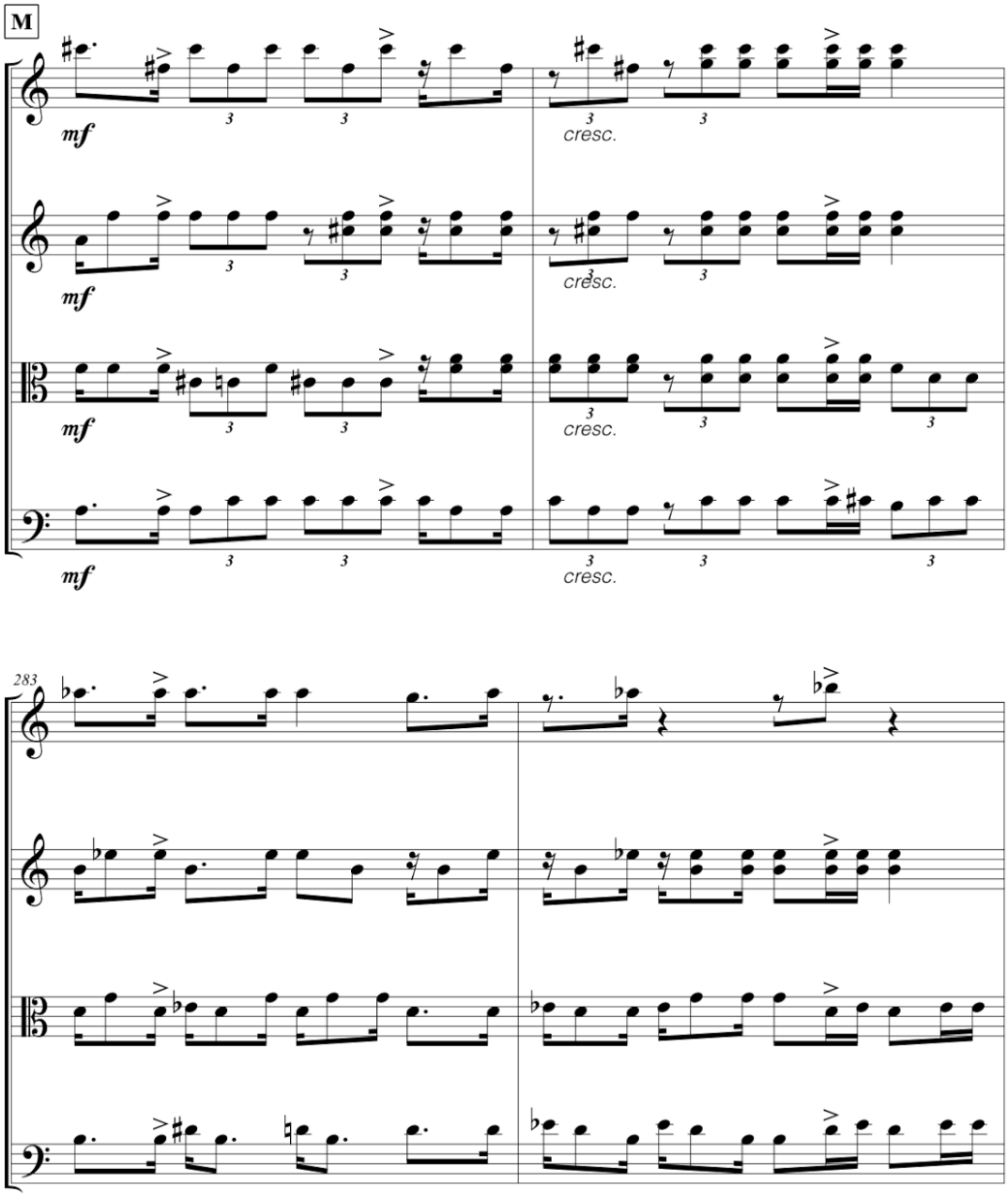

256
f
cresc.
f
cresc.
f
cresc.

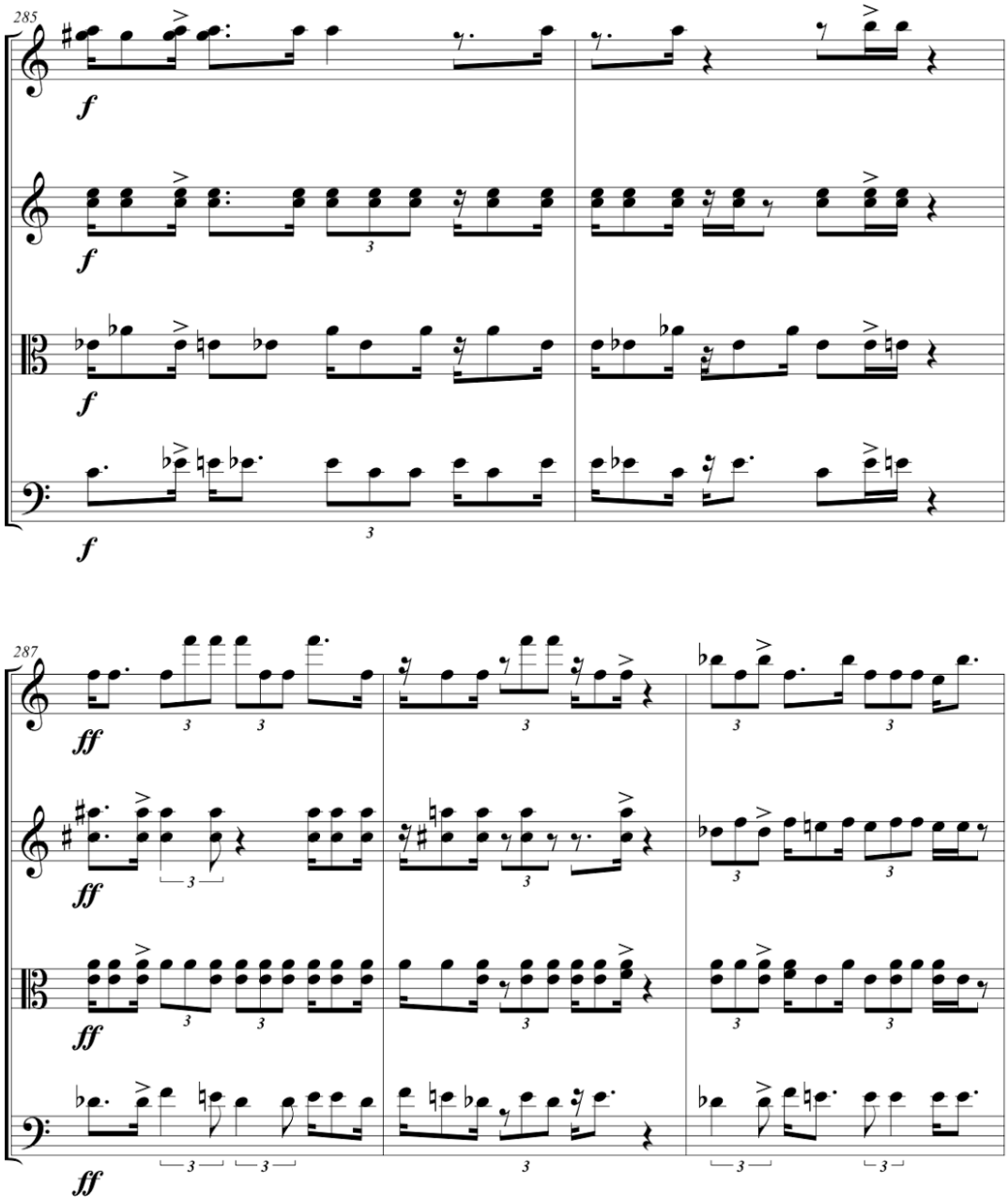

258
ff
mp sub.
cresc.

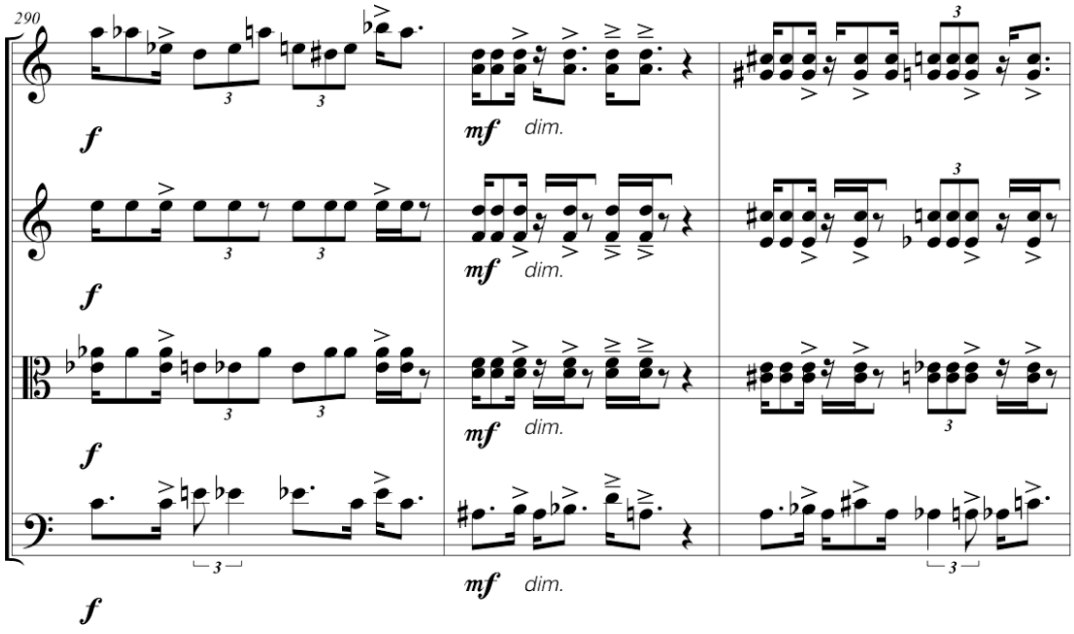

261
dim.
p
ff
dim.
f

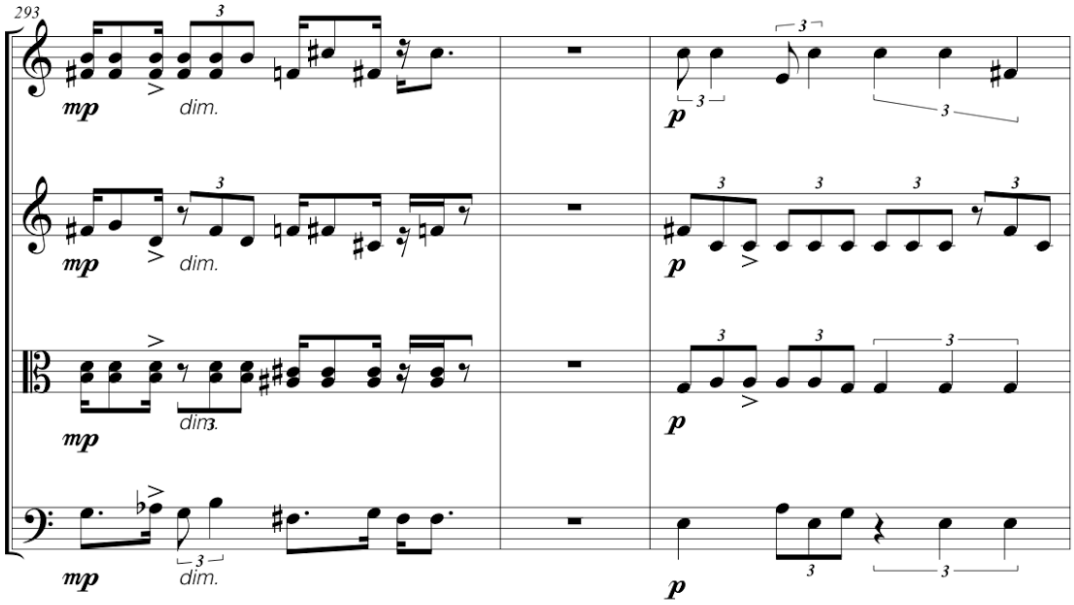

(electronics solo break)
265
dim.
mf

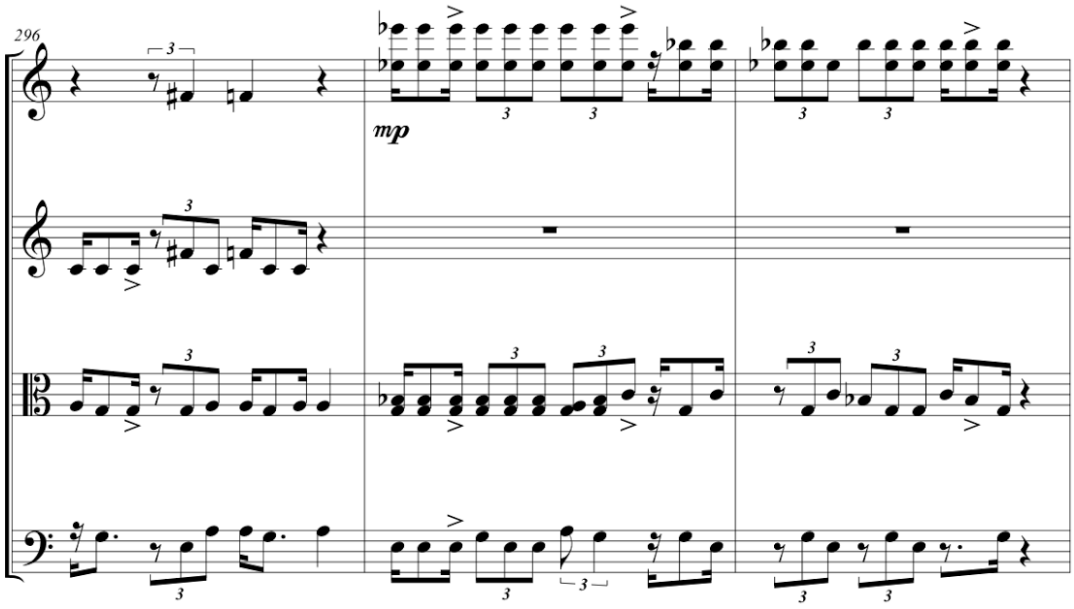

(+ vocals)
273

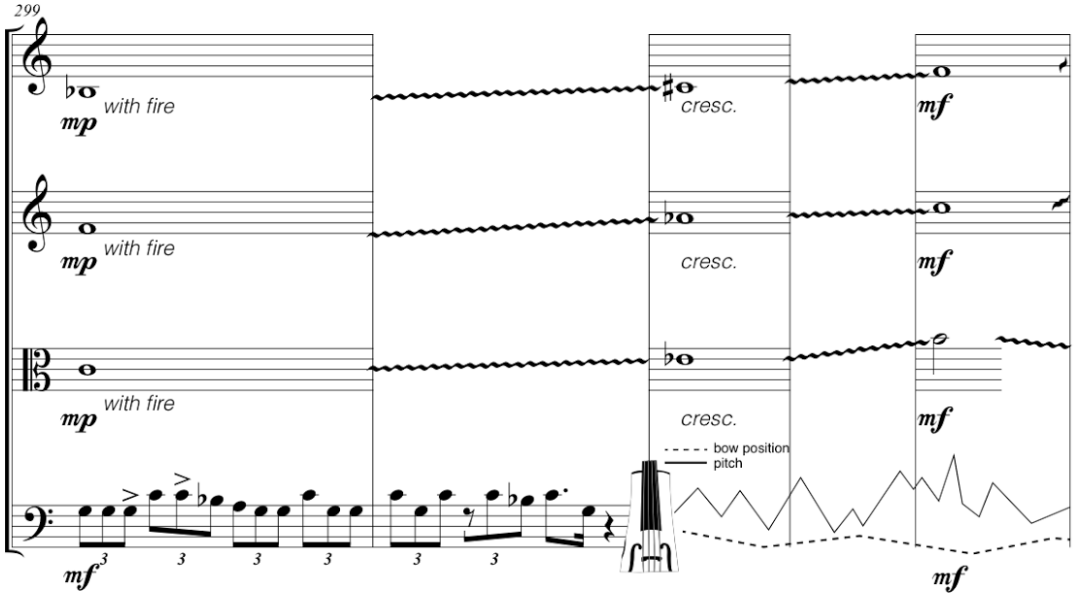

M
mf
cresc.
283

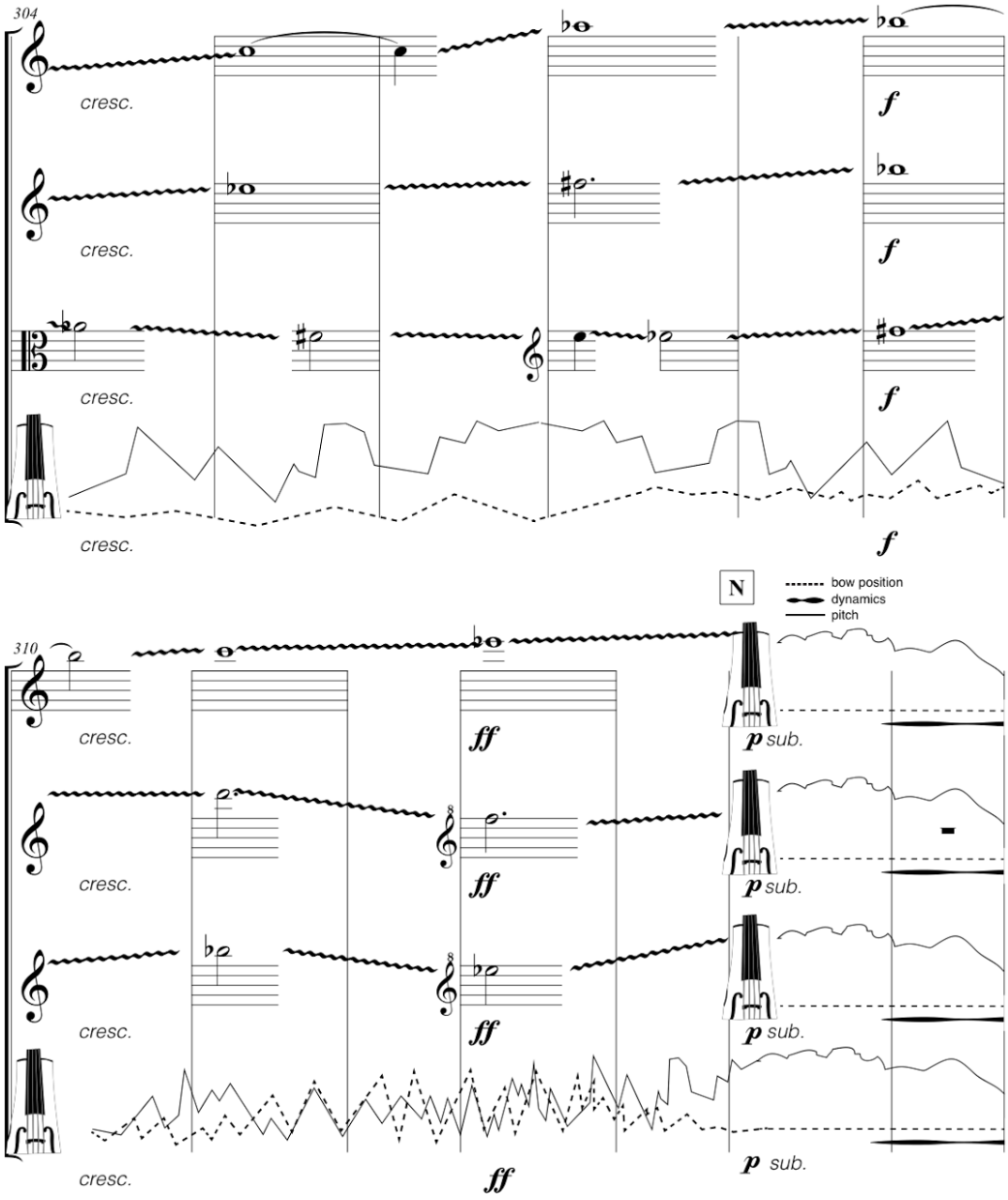

285
287
f
ff

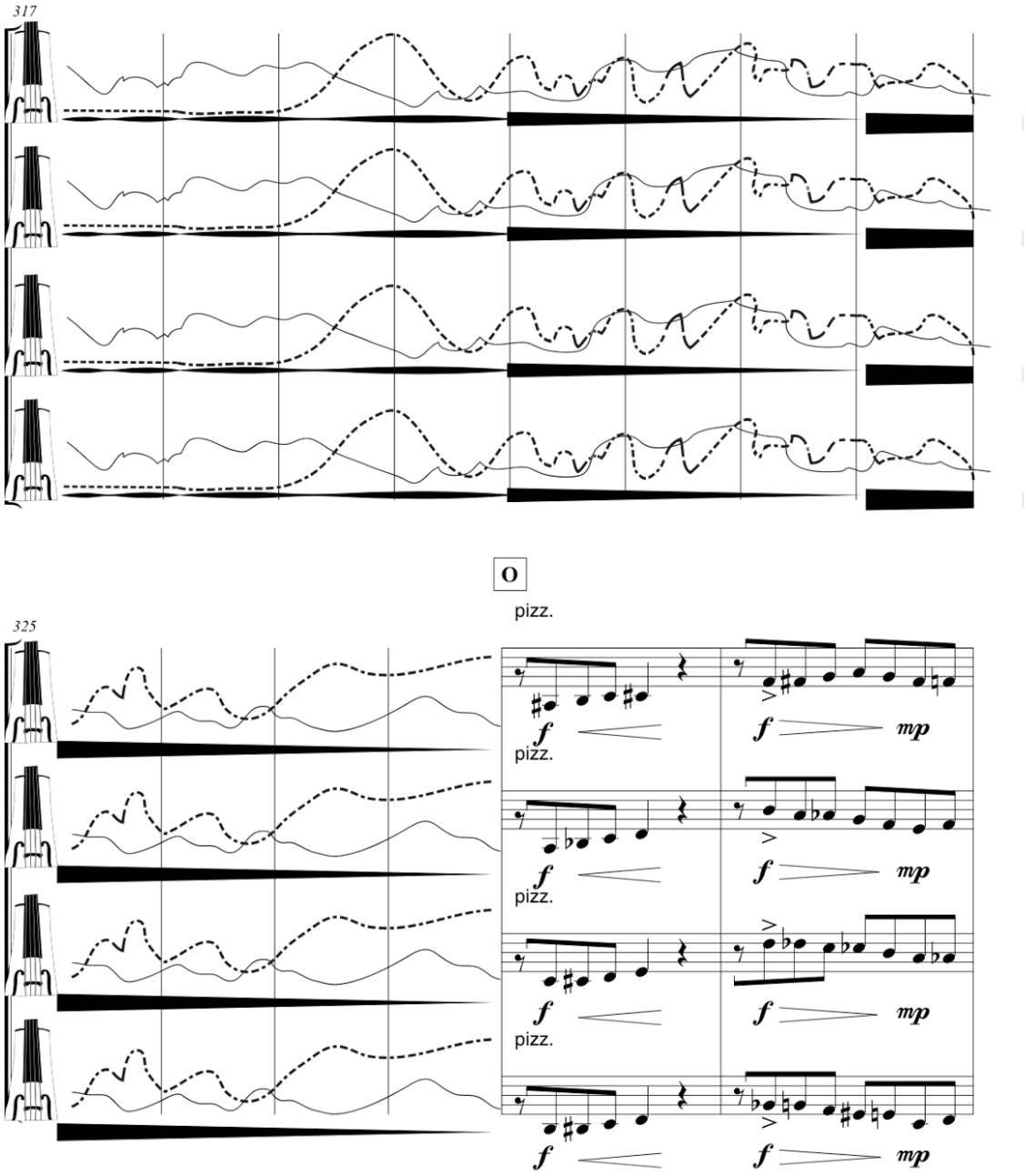

290
f
mf dim.

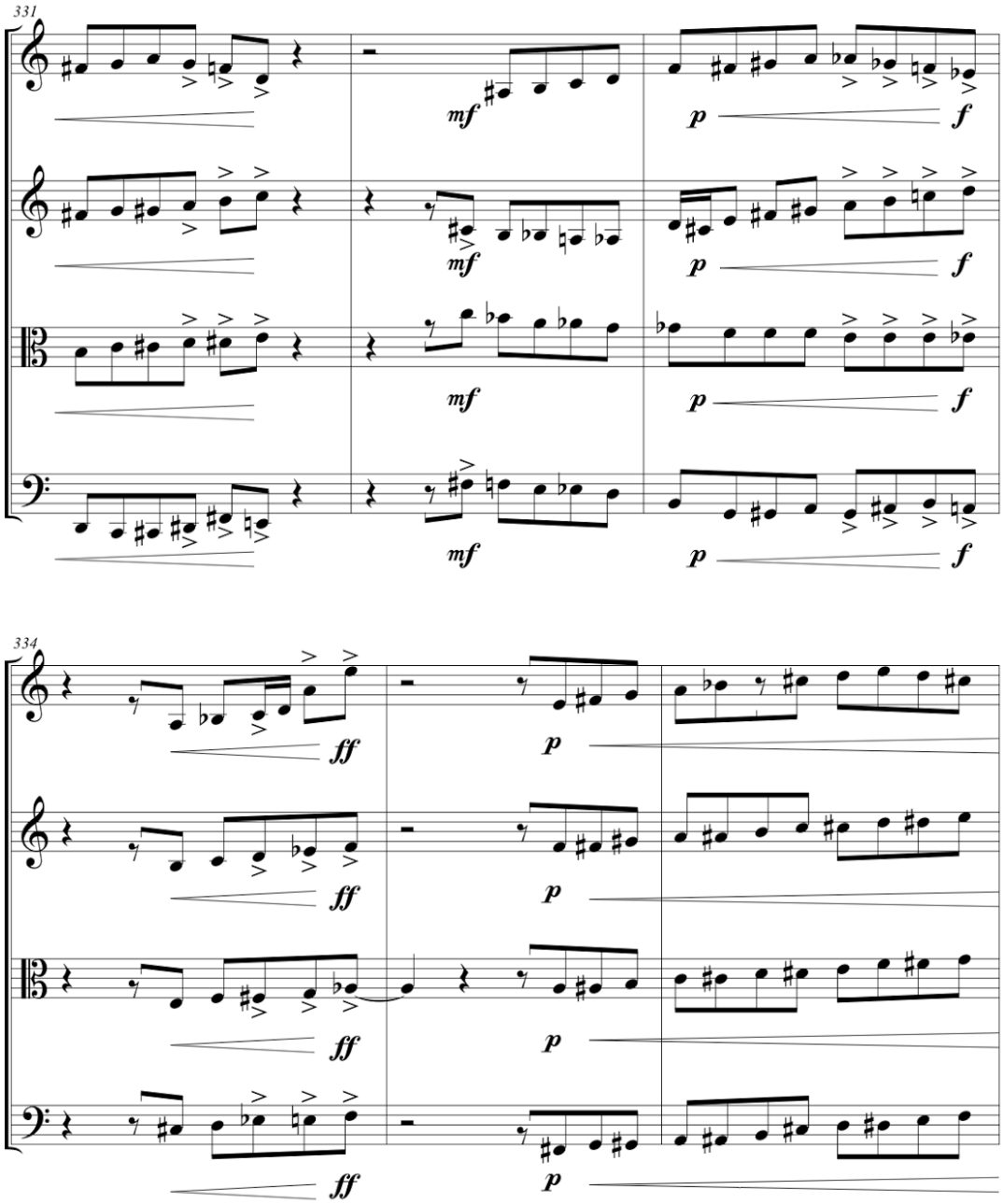

293
mp dim.
p

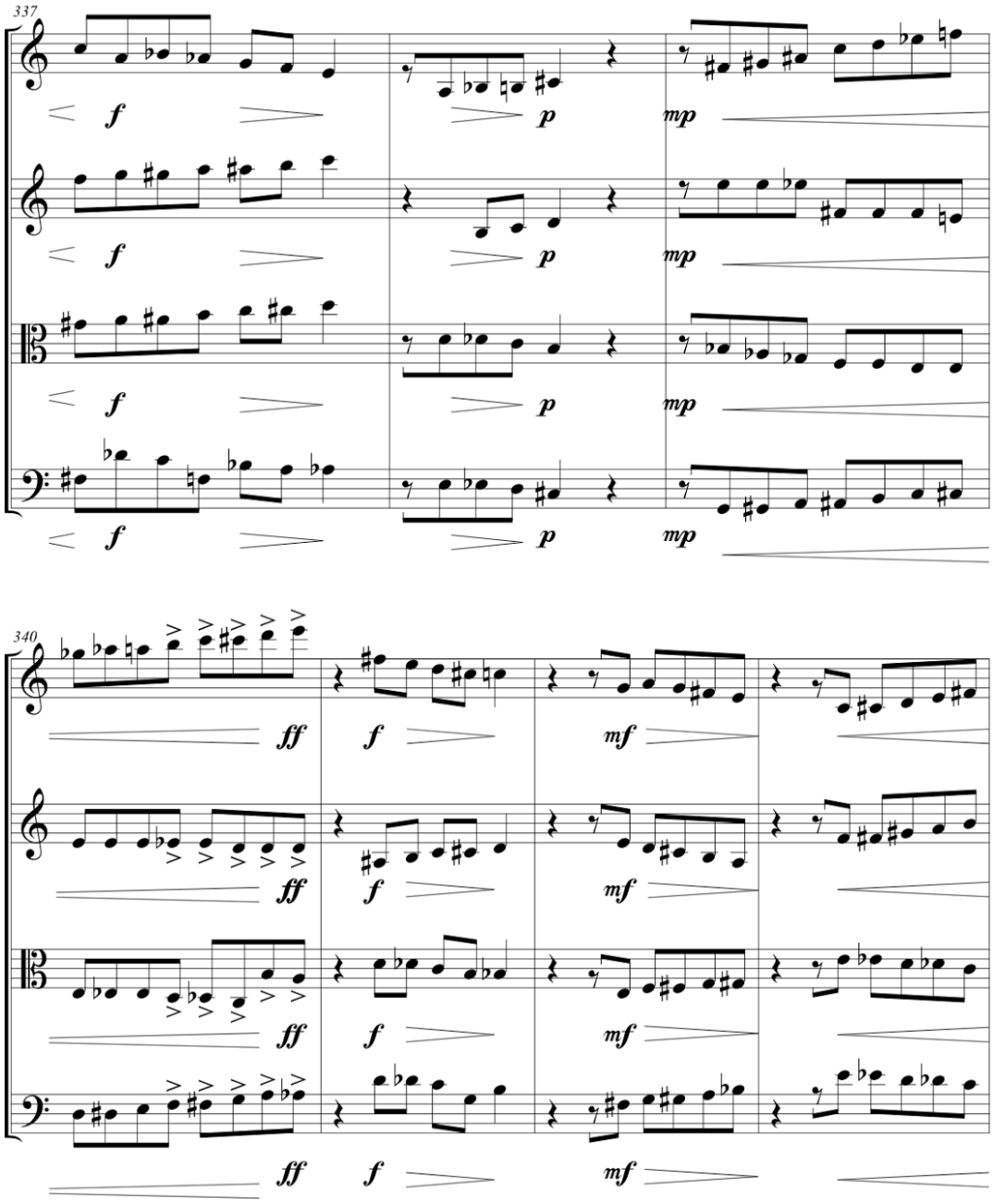

296
mp

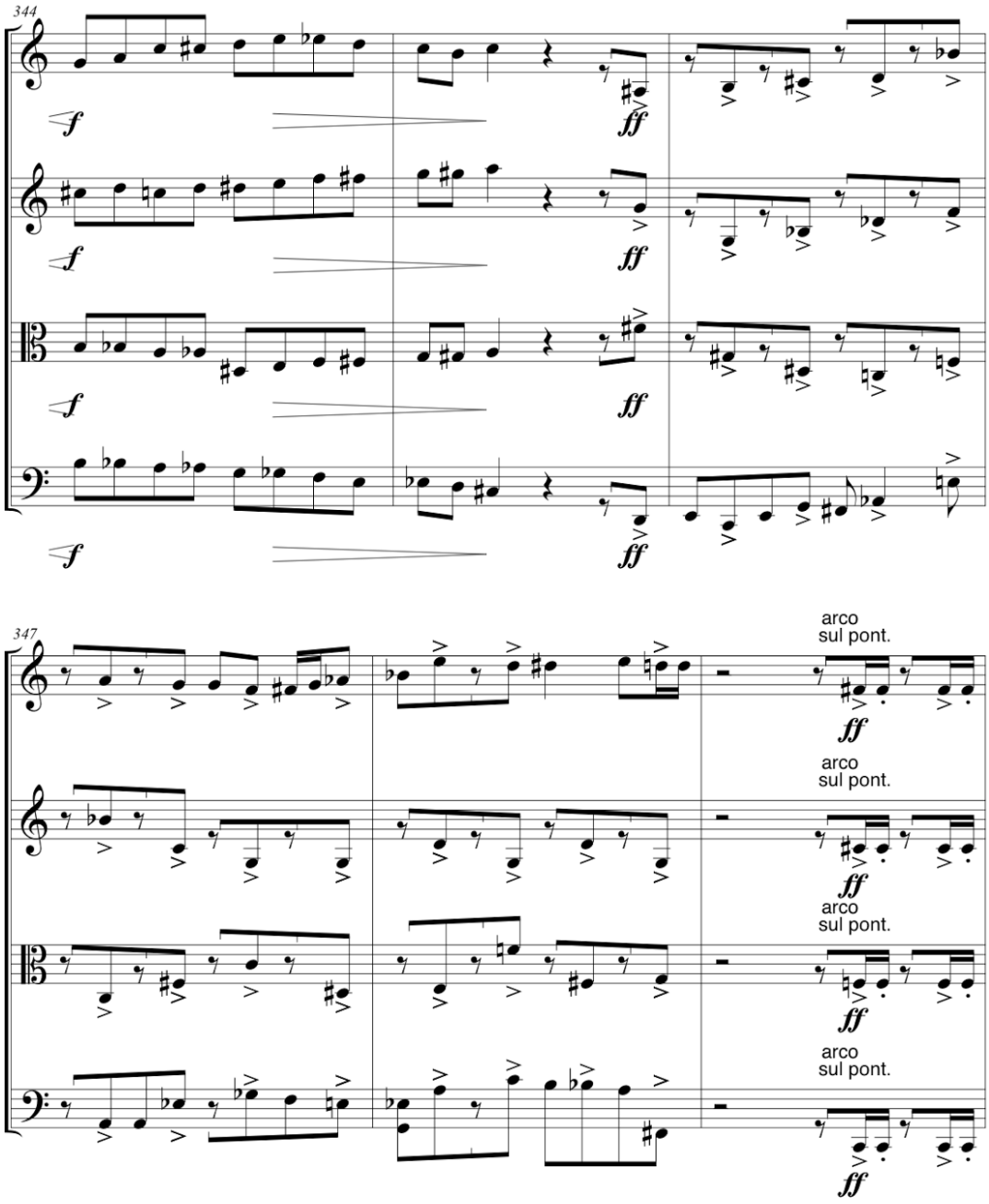

299
mp with fire
mp with fire
mp with fire
cresc.
cresc.
cresc.
mf
mf
mf
mf
mf
bow position
pitch

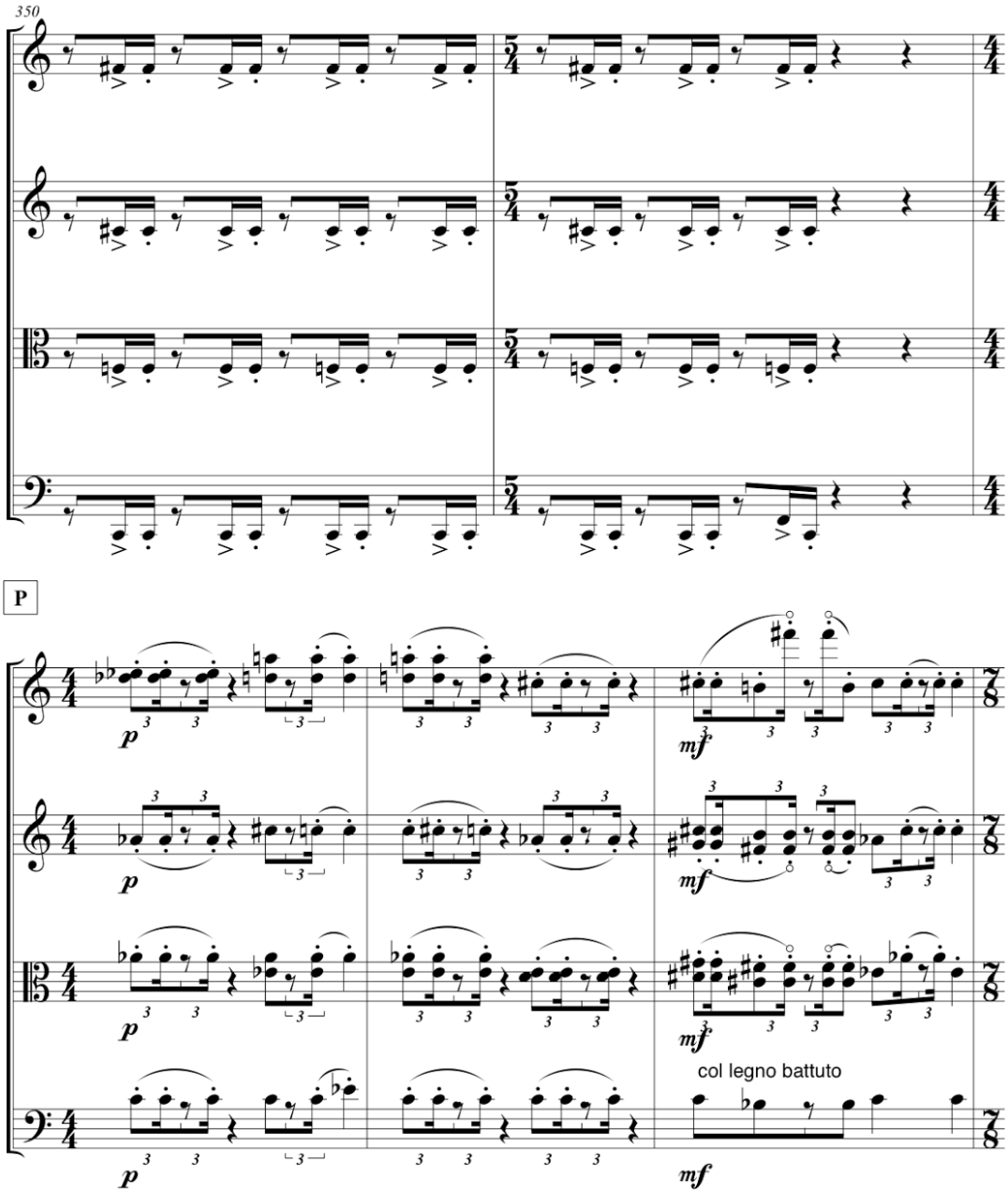

304
cresc.
cresc.
cresc.
cresc.
f
f
f
f
N
bow position
dynamics
pitch
310
cresc.
cresc.
cresc.
cresc.
ff
ff
ff
ff
p sub.
p sub.
p sub.
p sub.

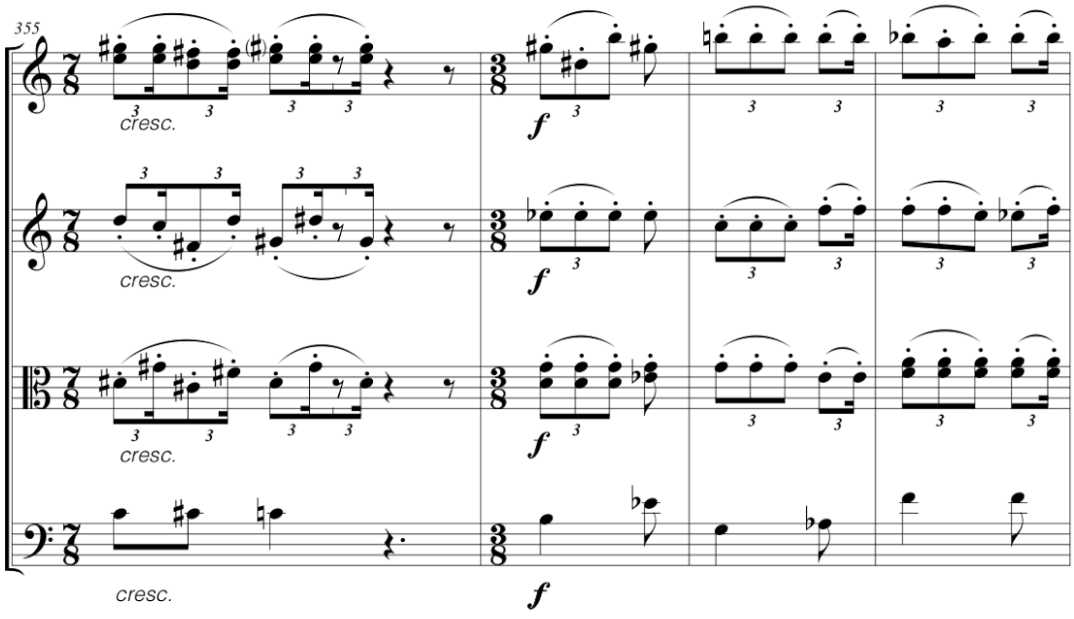

317
O
pizz.
325
pizz.
pizz.
pizz.
f
mp

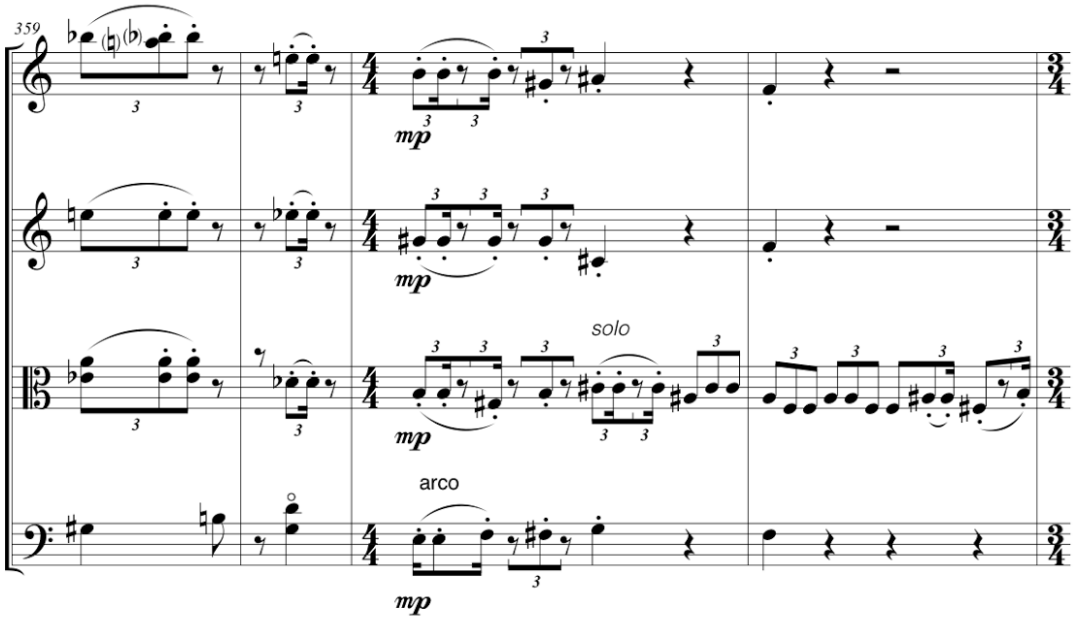

331
mf
p
f
334
ff
p

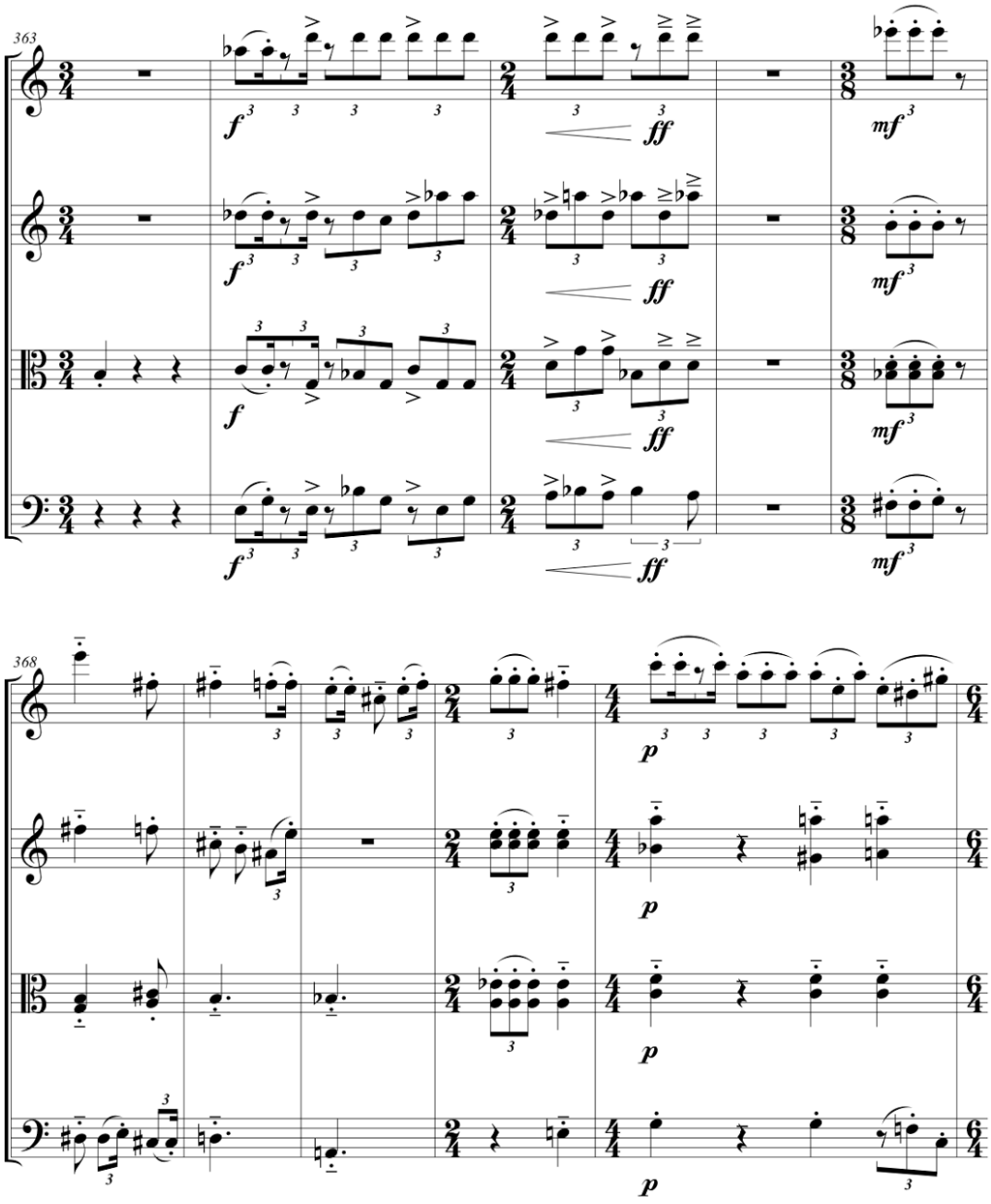

337
f
p
mp
340
ff
f
mf

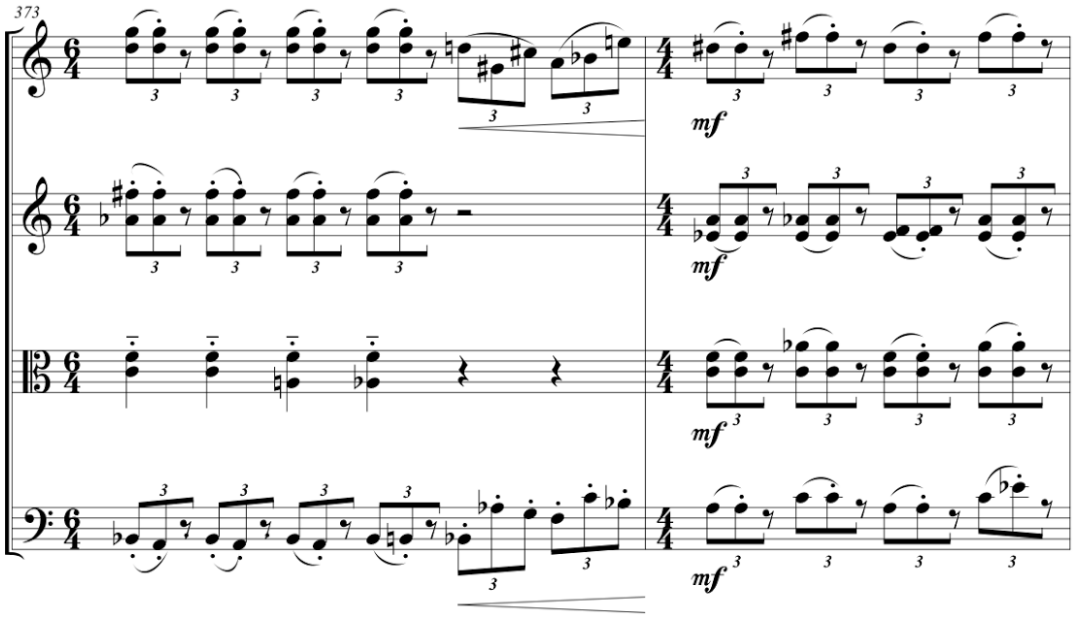

344
347
arco
sul pont.
arco
sul pont.
arco
sul pont.
arco
sul pont.

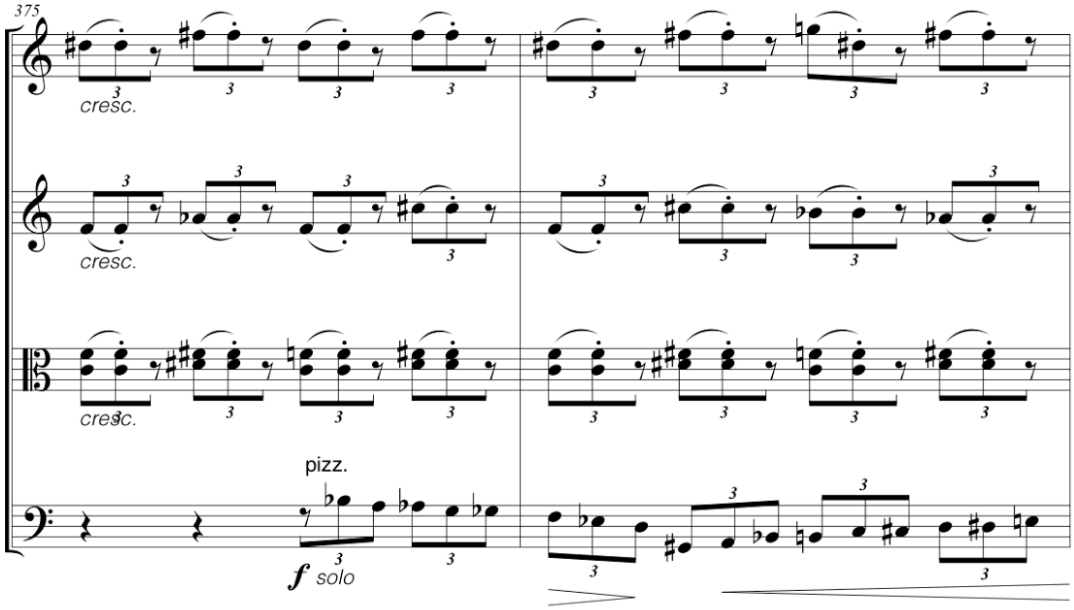

350
P
col legno battuto

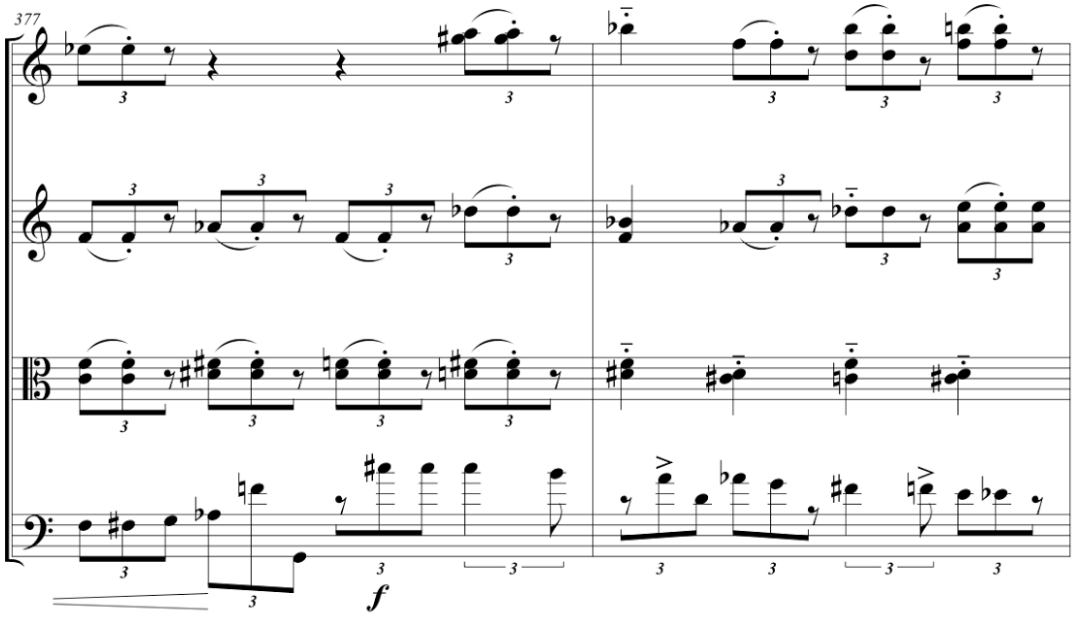

355
cresc.
cresc.
cresc.
cresc.
f
f
f
f

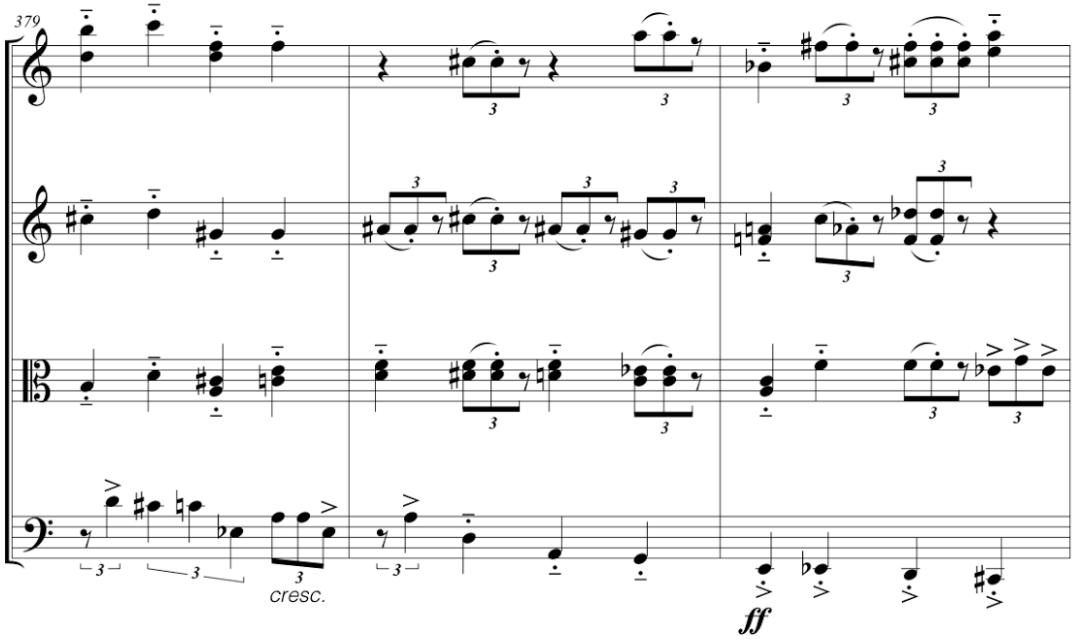

359
mp
mp
solo
mp
arco
mp


363
368


373
mf
mf
mf
mf

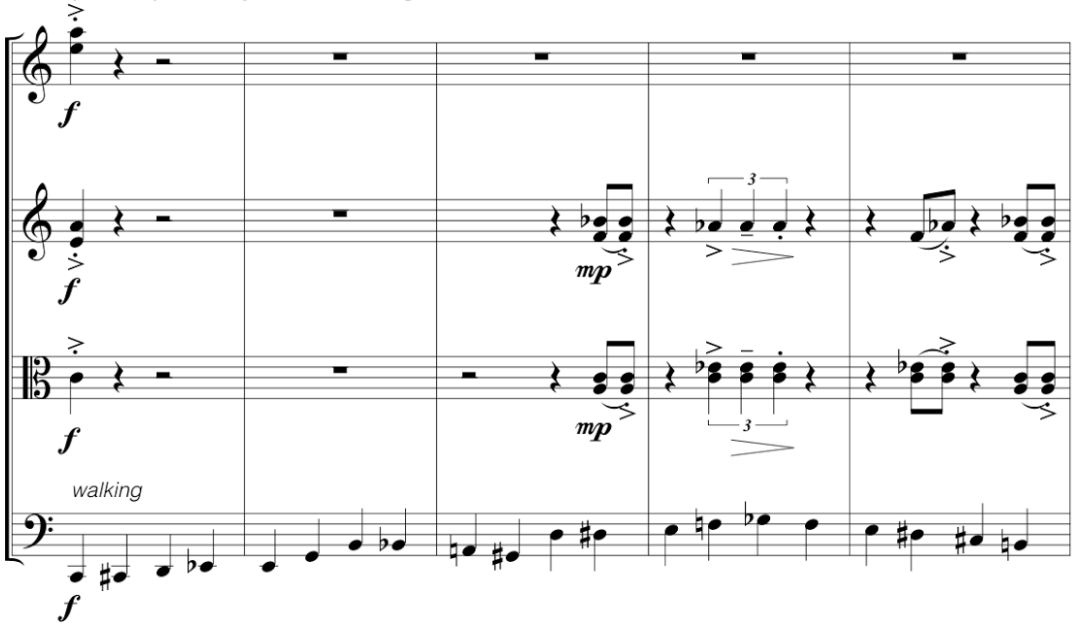

375
cresc.
cresc.
cresc.
pizz.
f solo


377
f

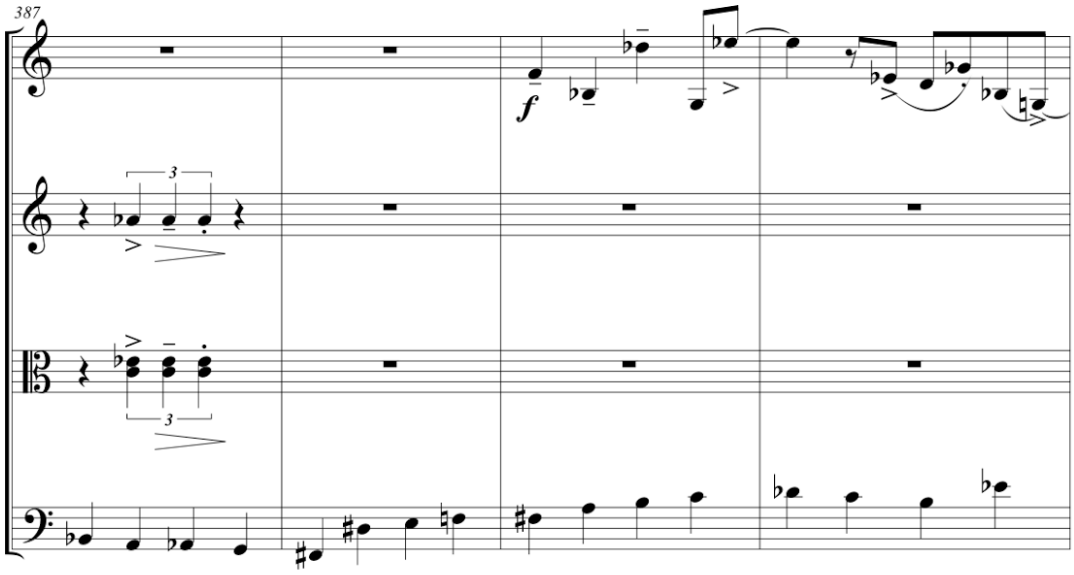

379
cresc.
ff

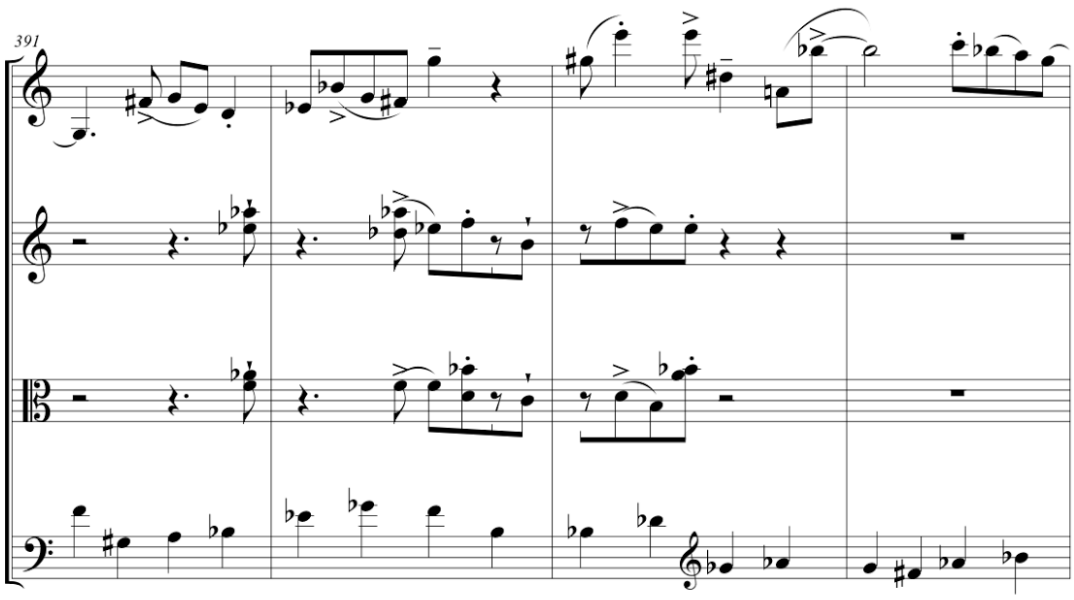
Q

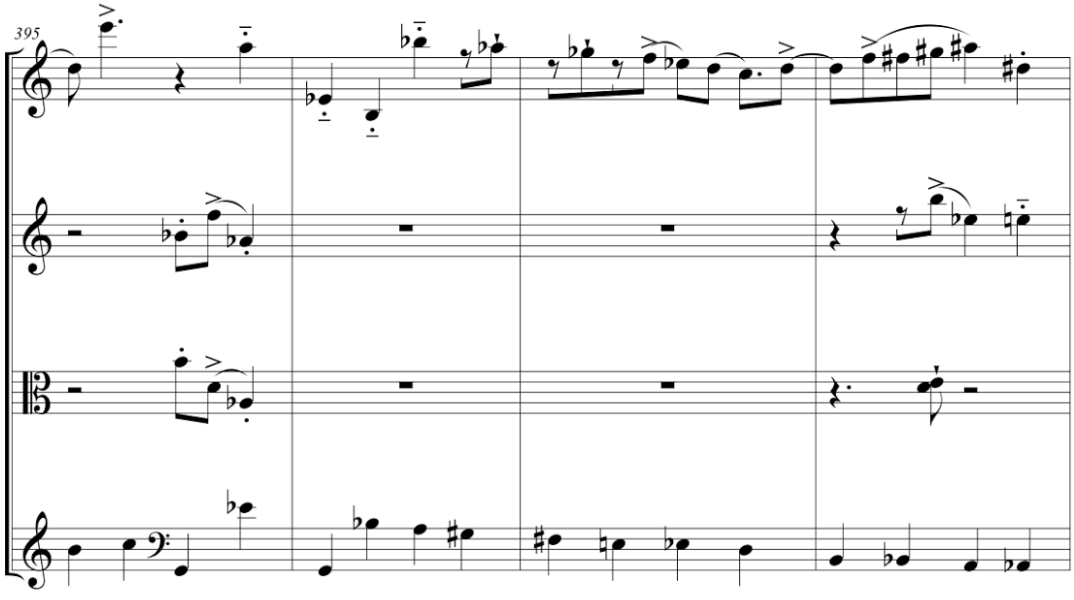
(♪ = ♩) **Med-up** ♩ = 200**, swing feel** ♫ = ♩ ³ ♪

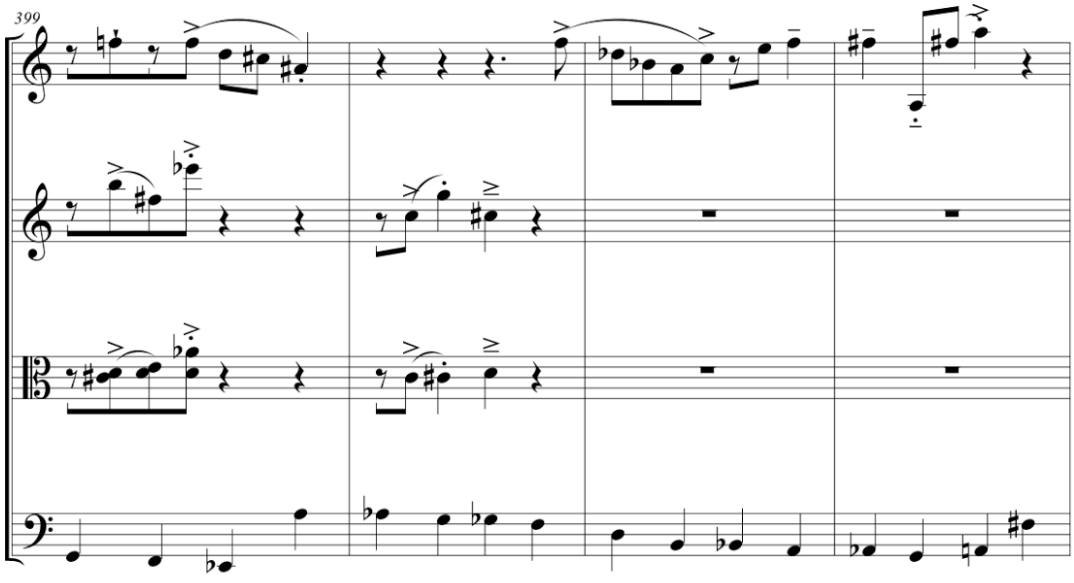


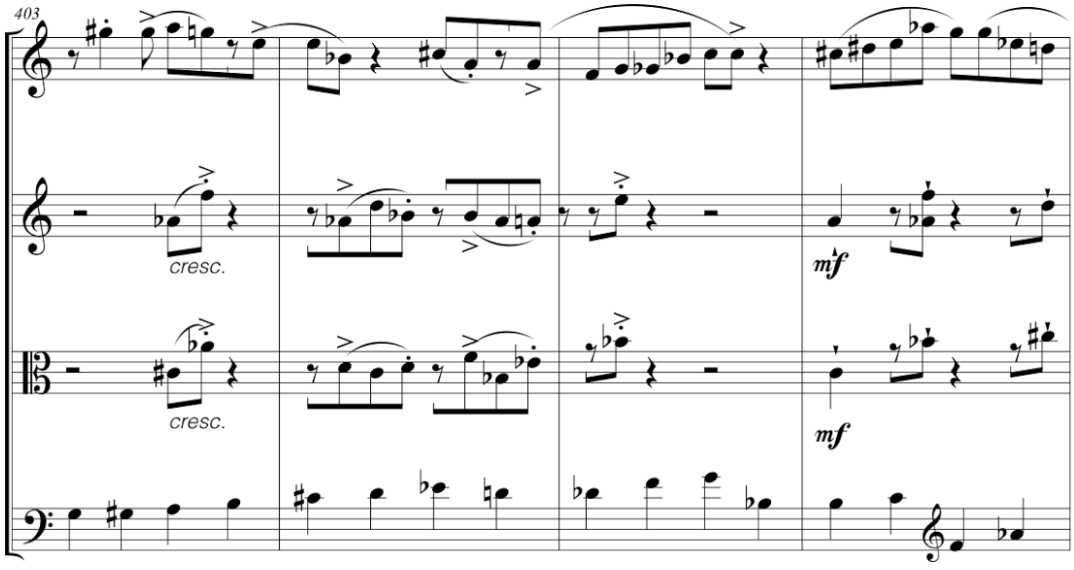
à la John Coltrane

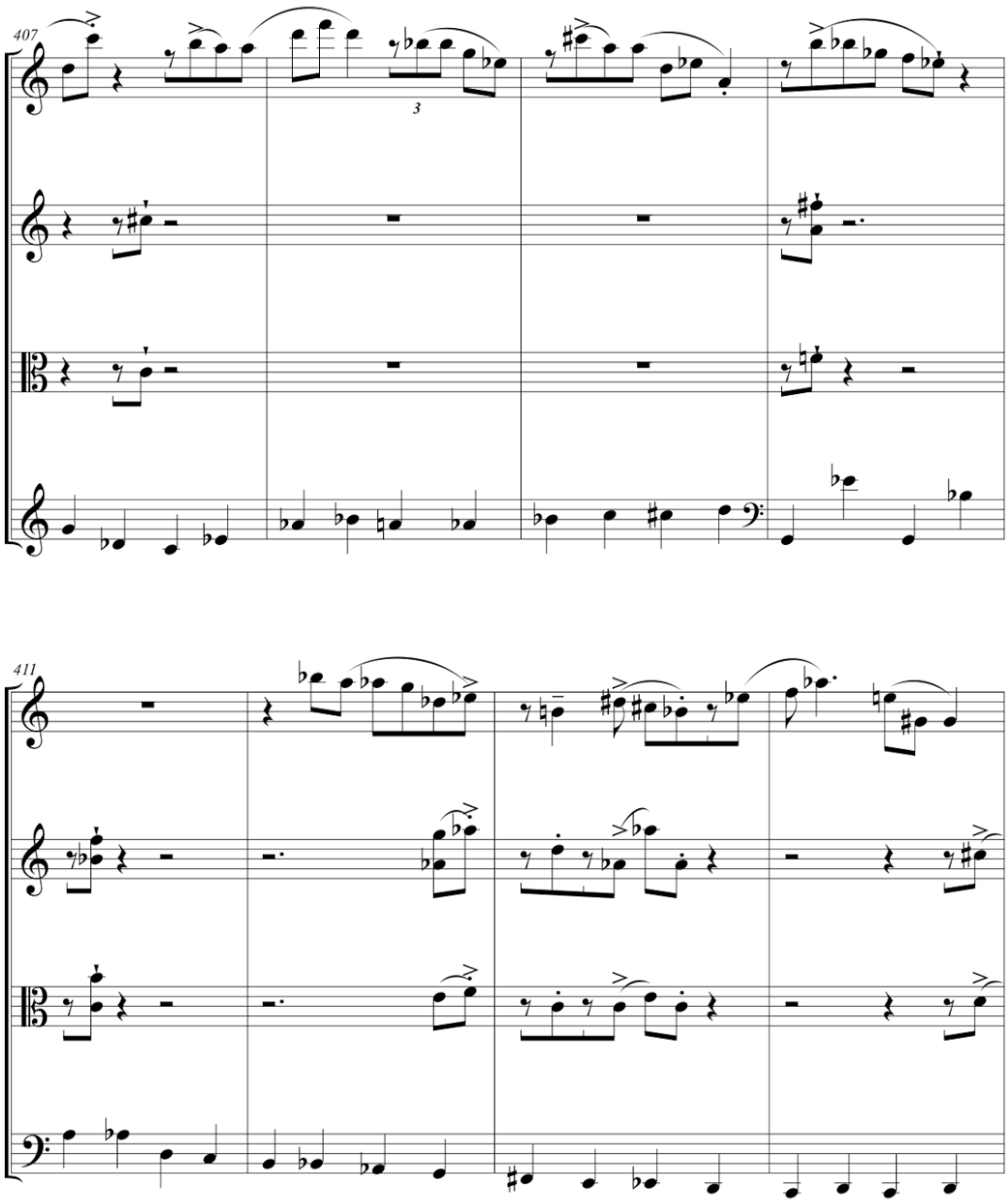


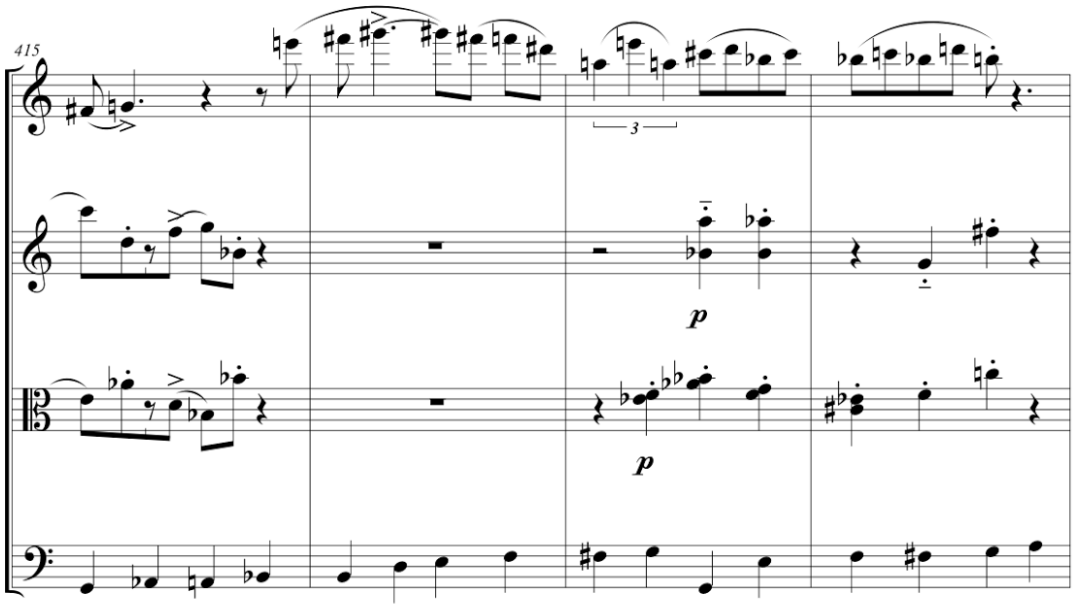

391

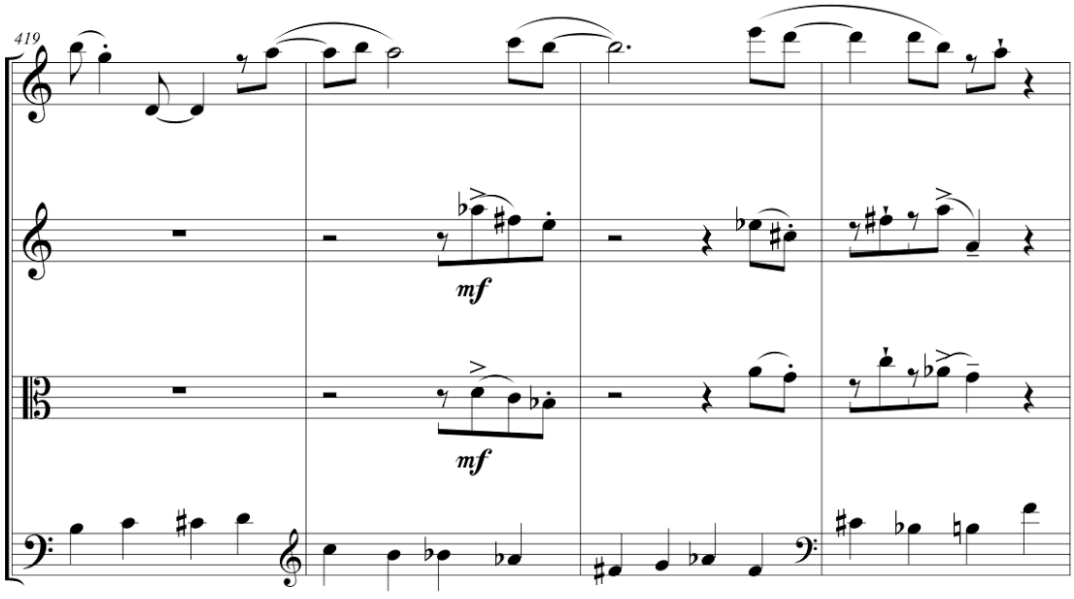

395

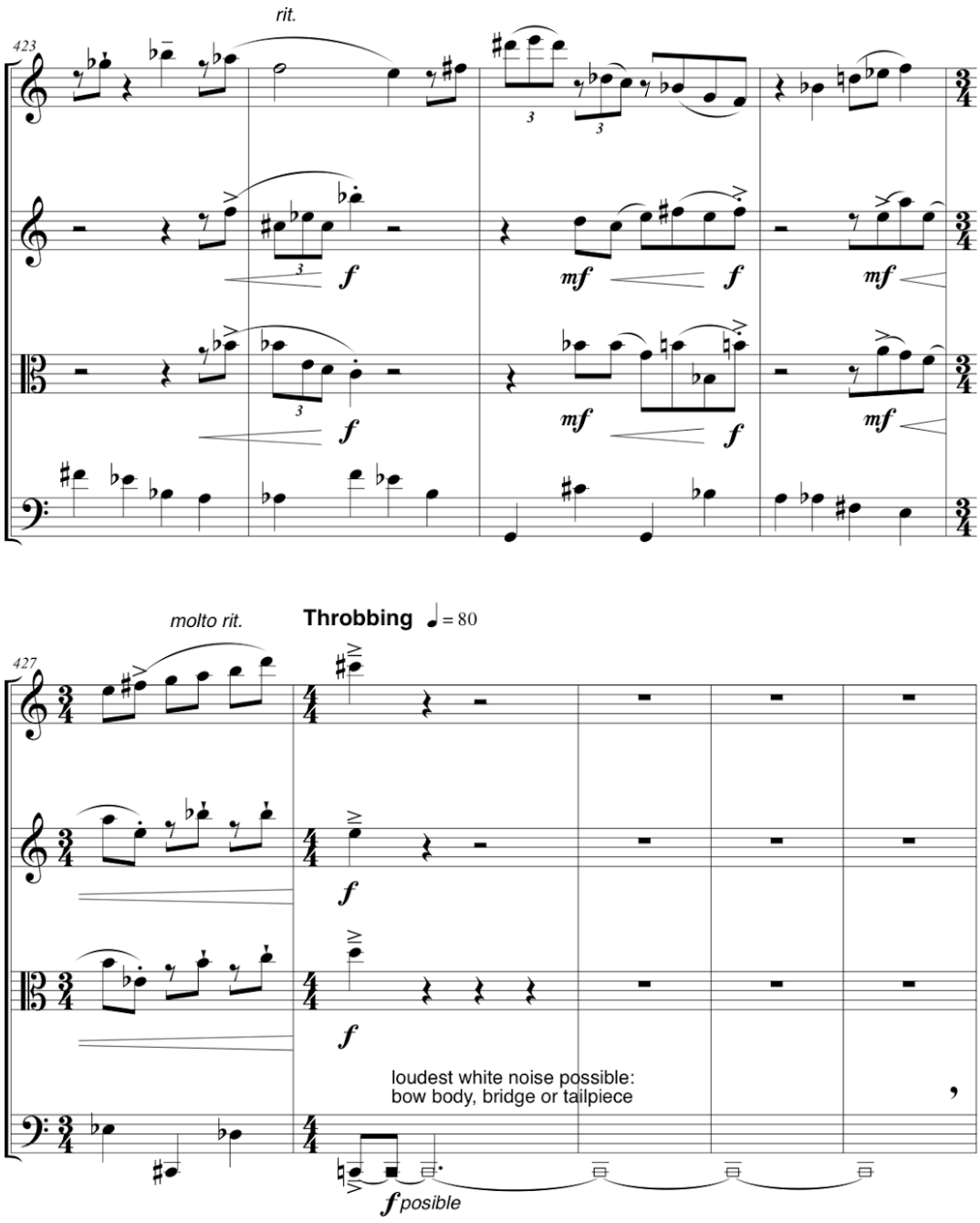

399

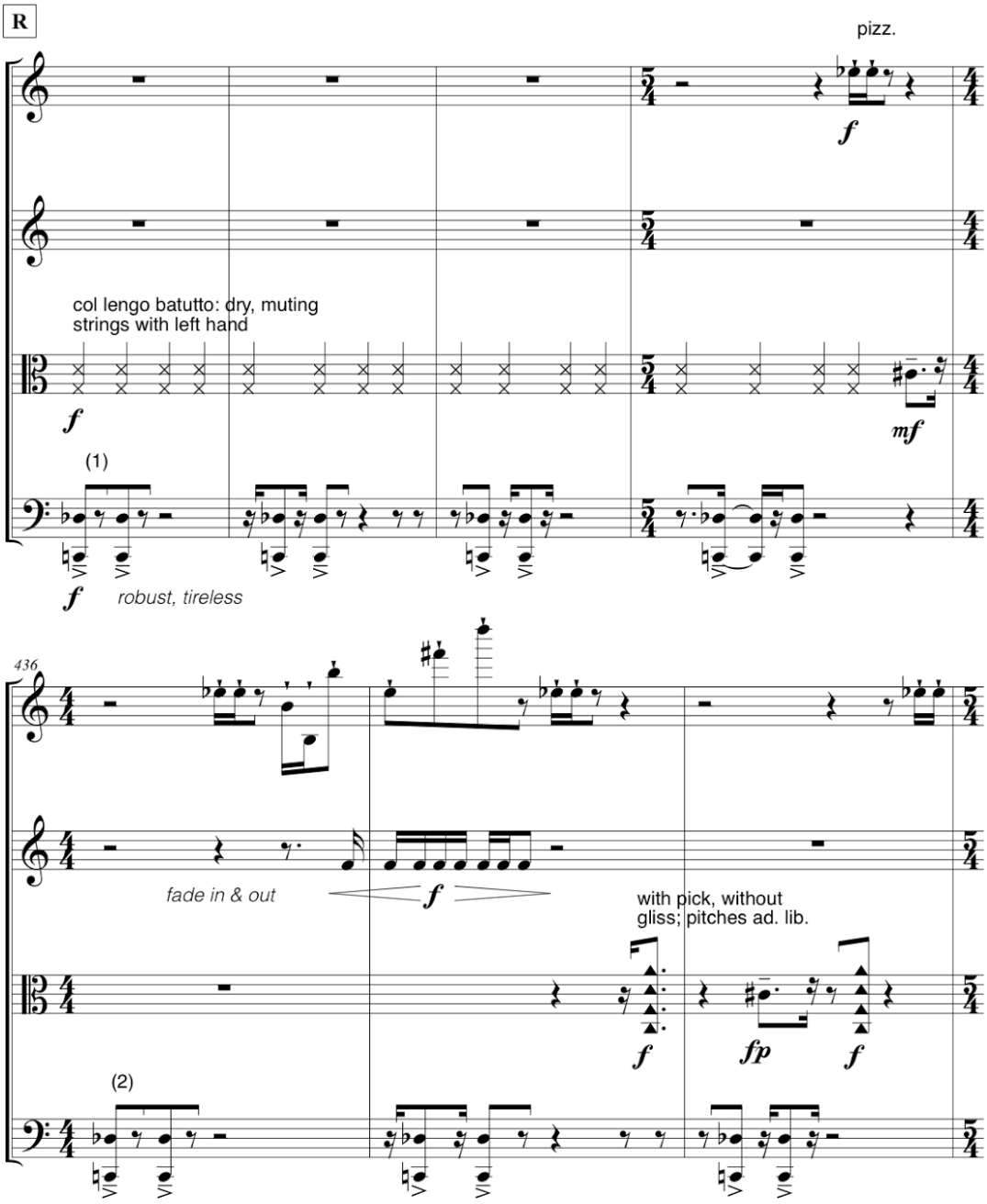

403
cresc.
cresc.
mf
mf

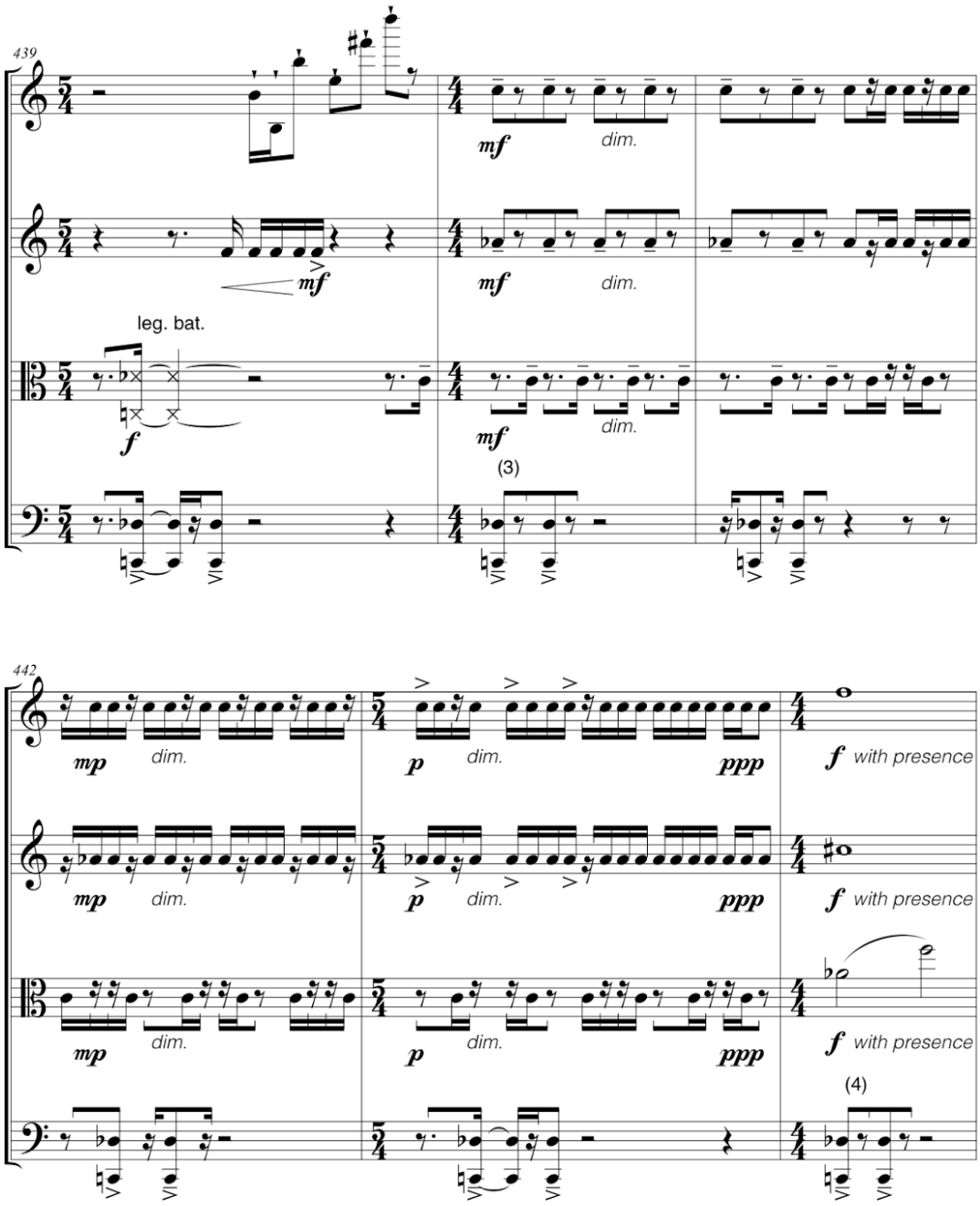

407
3
411

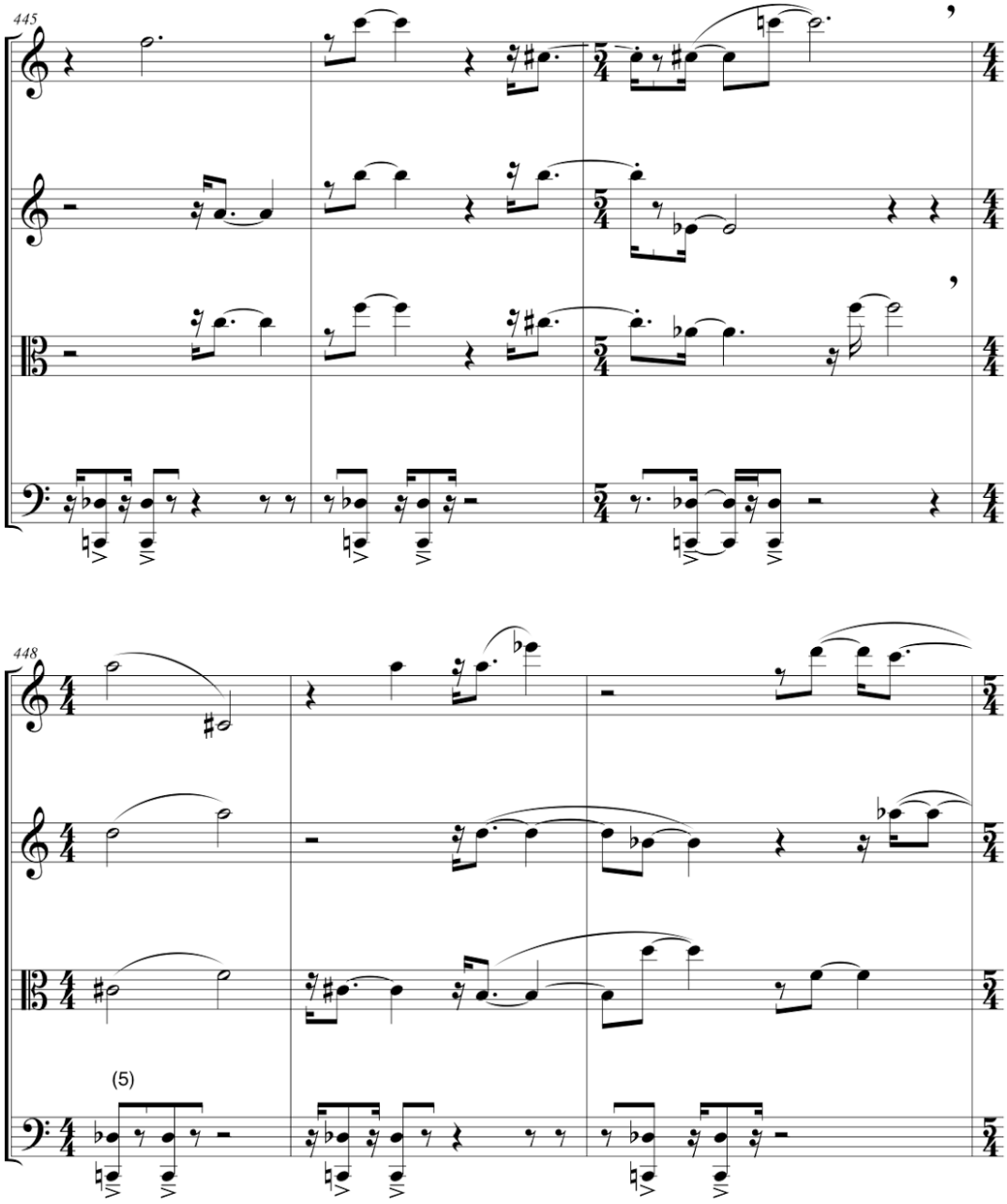

415
3
p
p

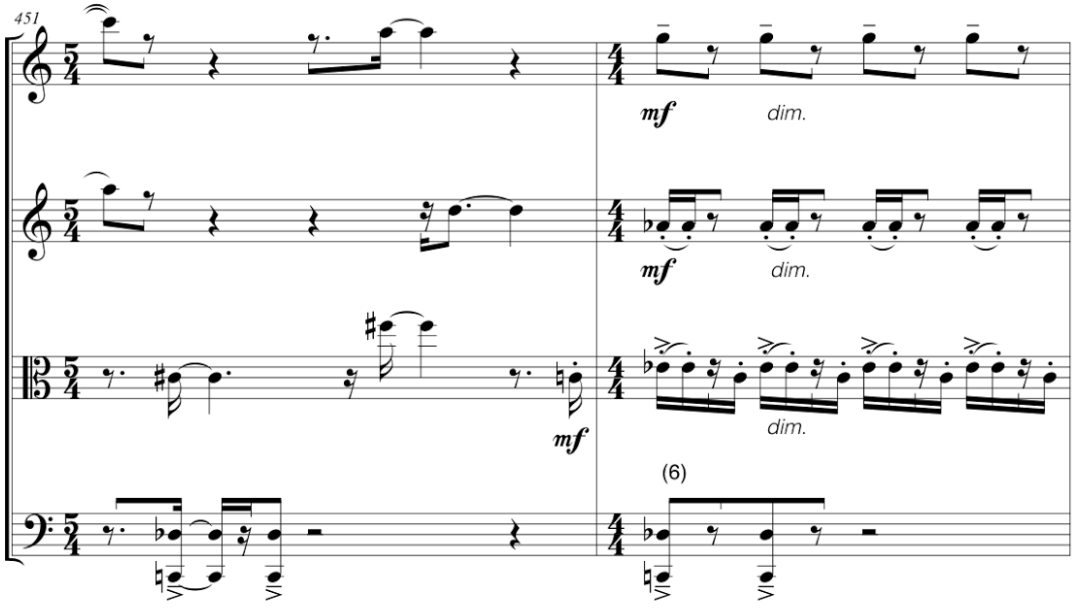

419
mf
mf

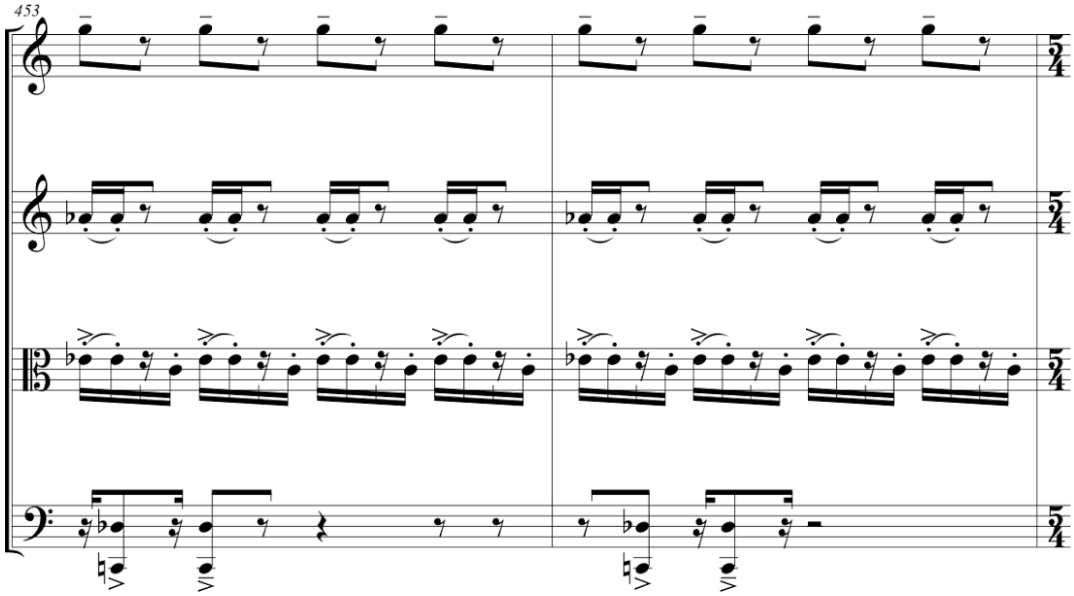

rit.
423
molto rit.
Throbbing ♩= 80
427
loudest white noise possible:
bow body, bridge or tailpiece
fposible

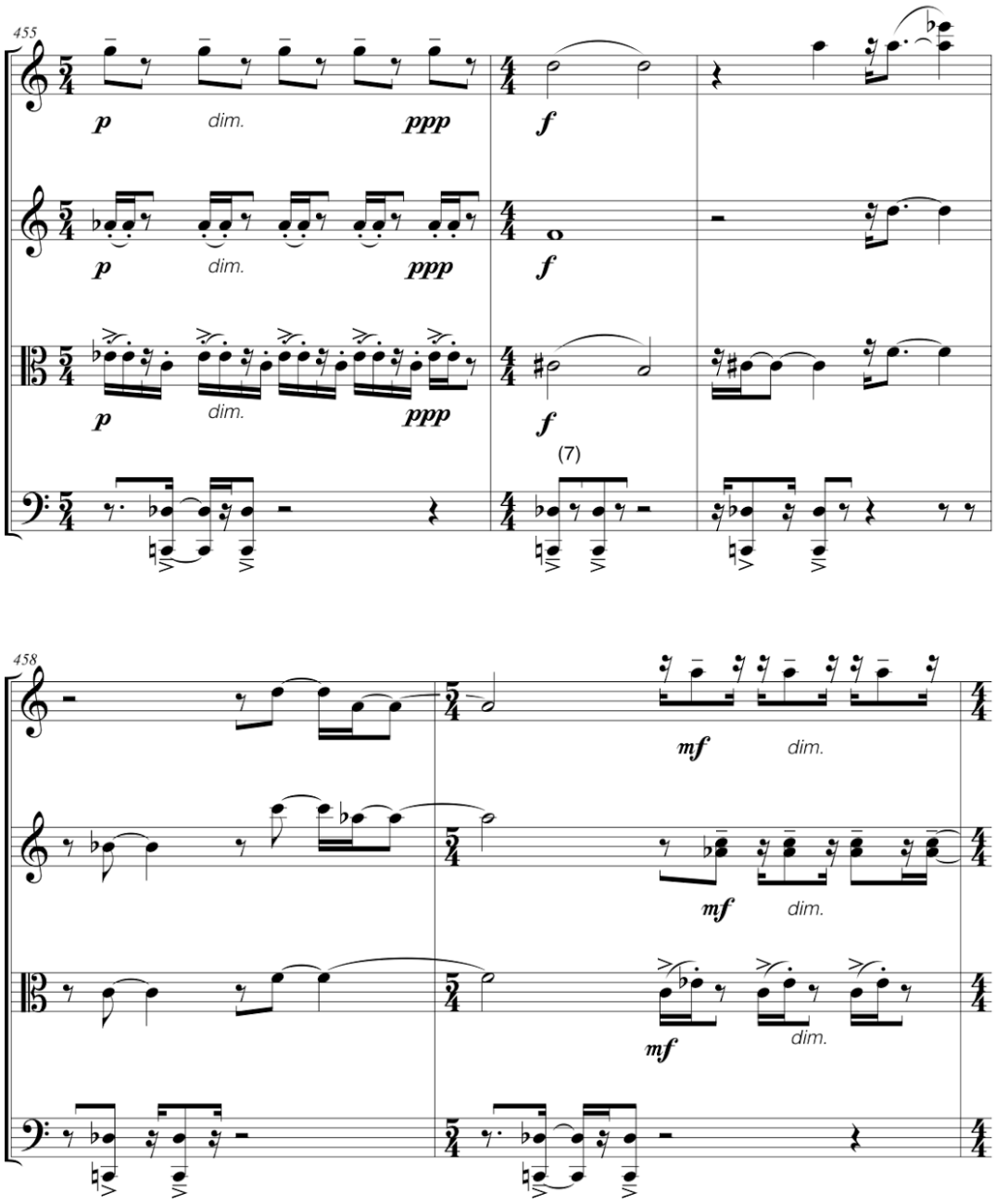

R
pizz.
f
col lengo batutto: dry, muting
strings with left hand
f
mf
(1)
f
robust, tireless
436
fade in & out
f
with pick, without
gliss; pitches ad. lib.
f
fp
f
(2)

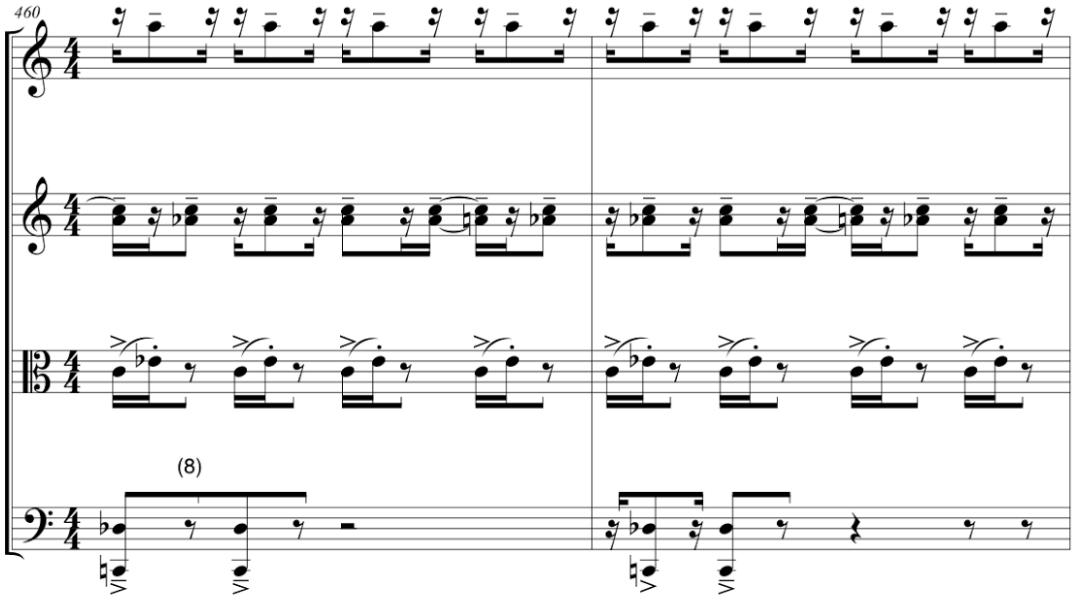

439
mf
dim.
leg. bat.
f
(3)
442
mp
p
ppp
f with presence
(4)

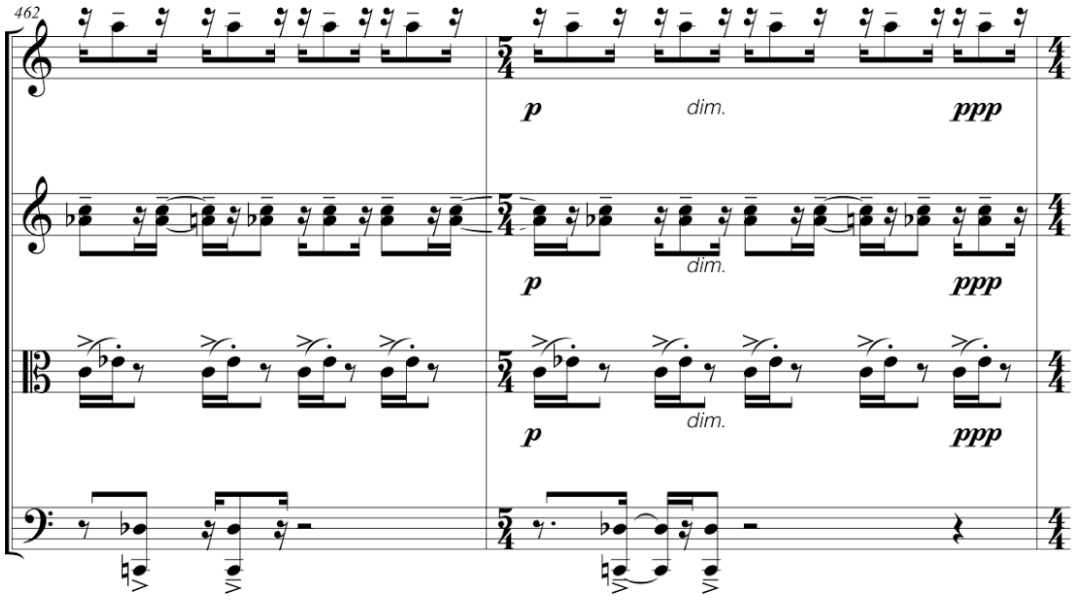

445
448
(5)

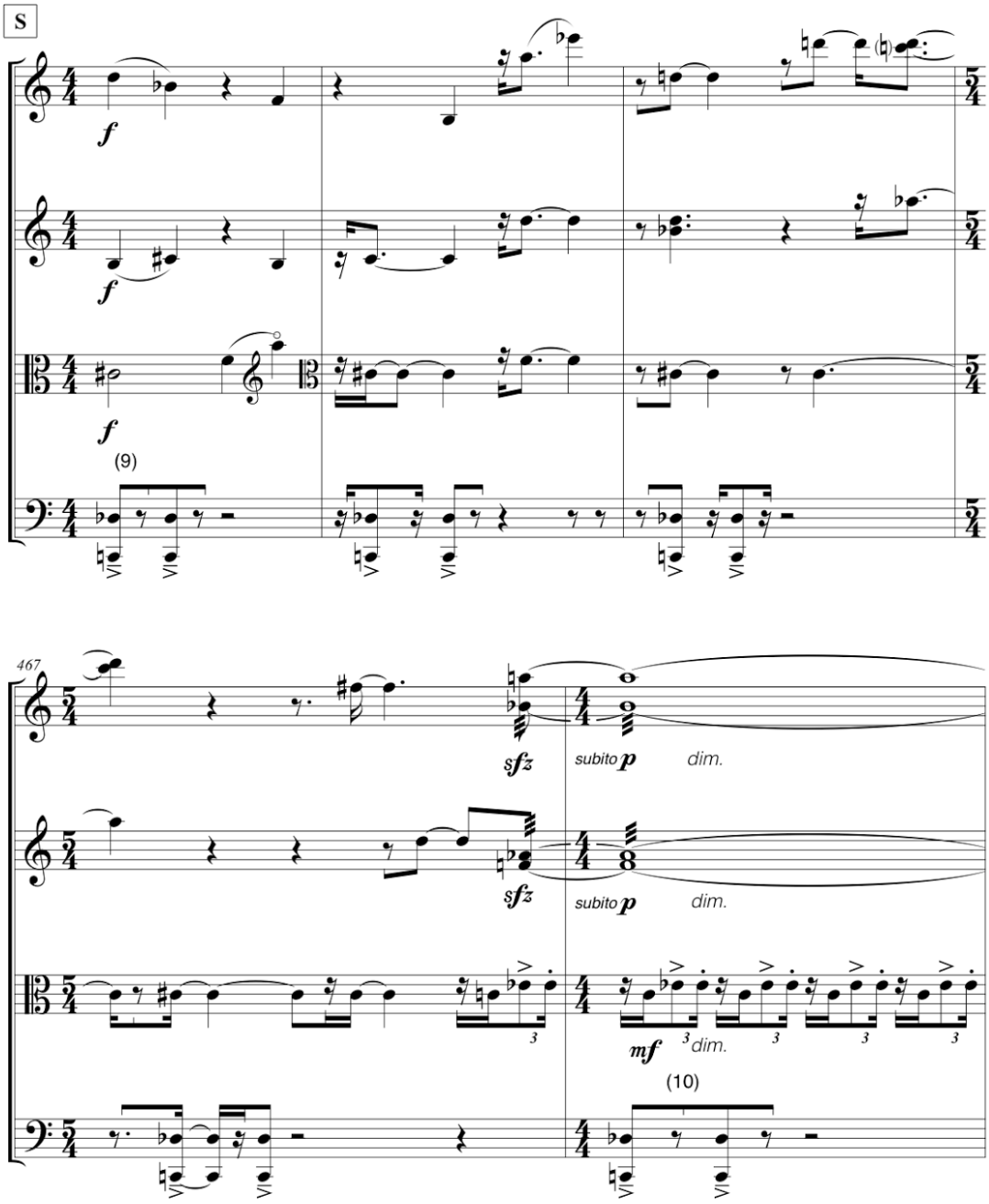

451
mf
dim.
mf
dim.
mf
dim.
(6)

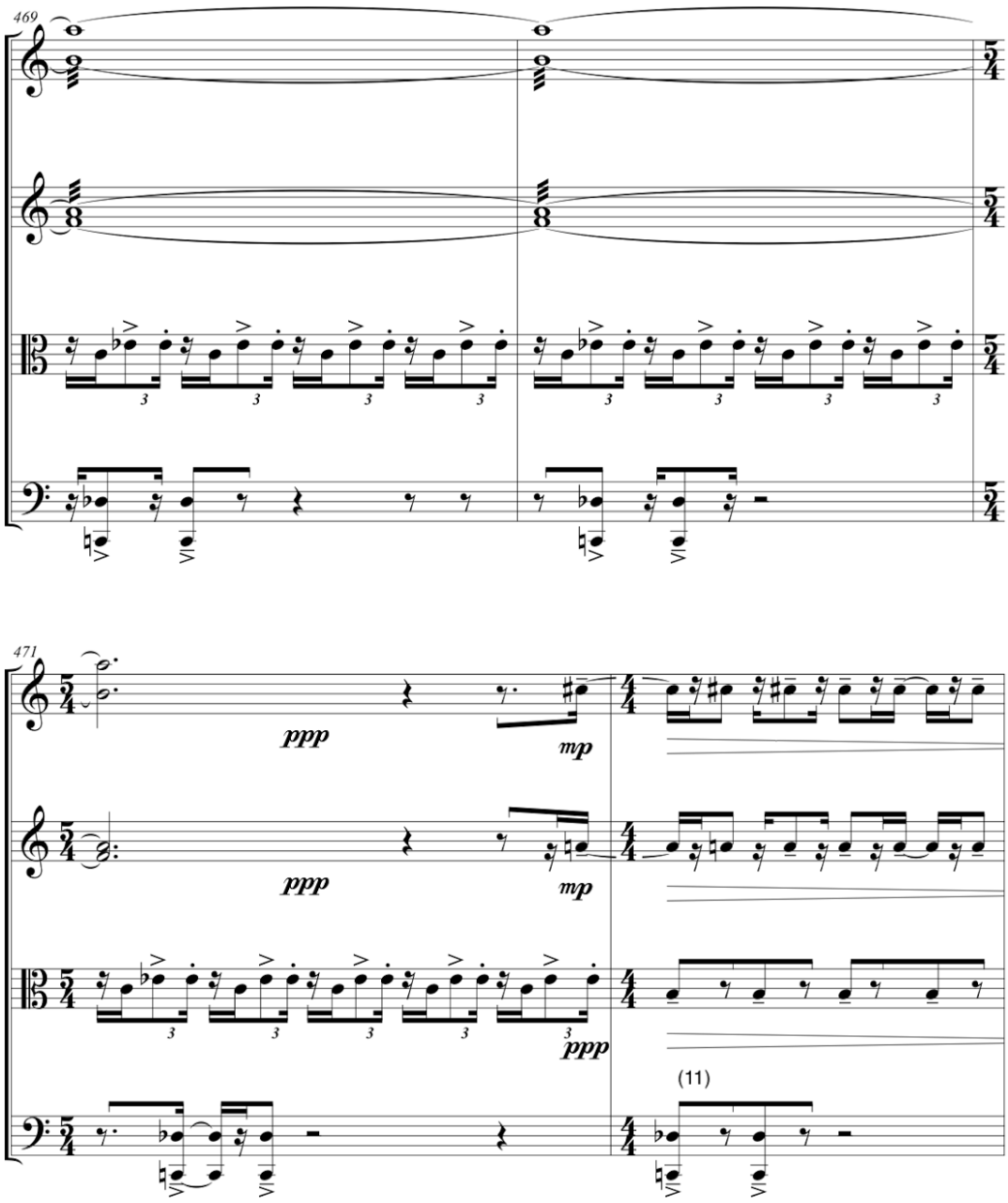

453

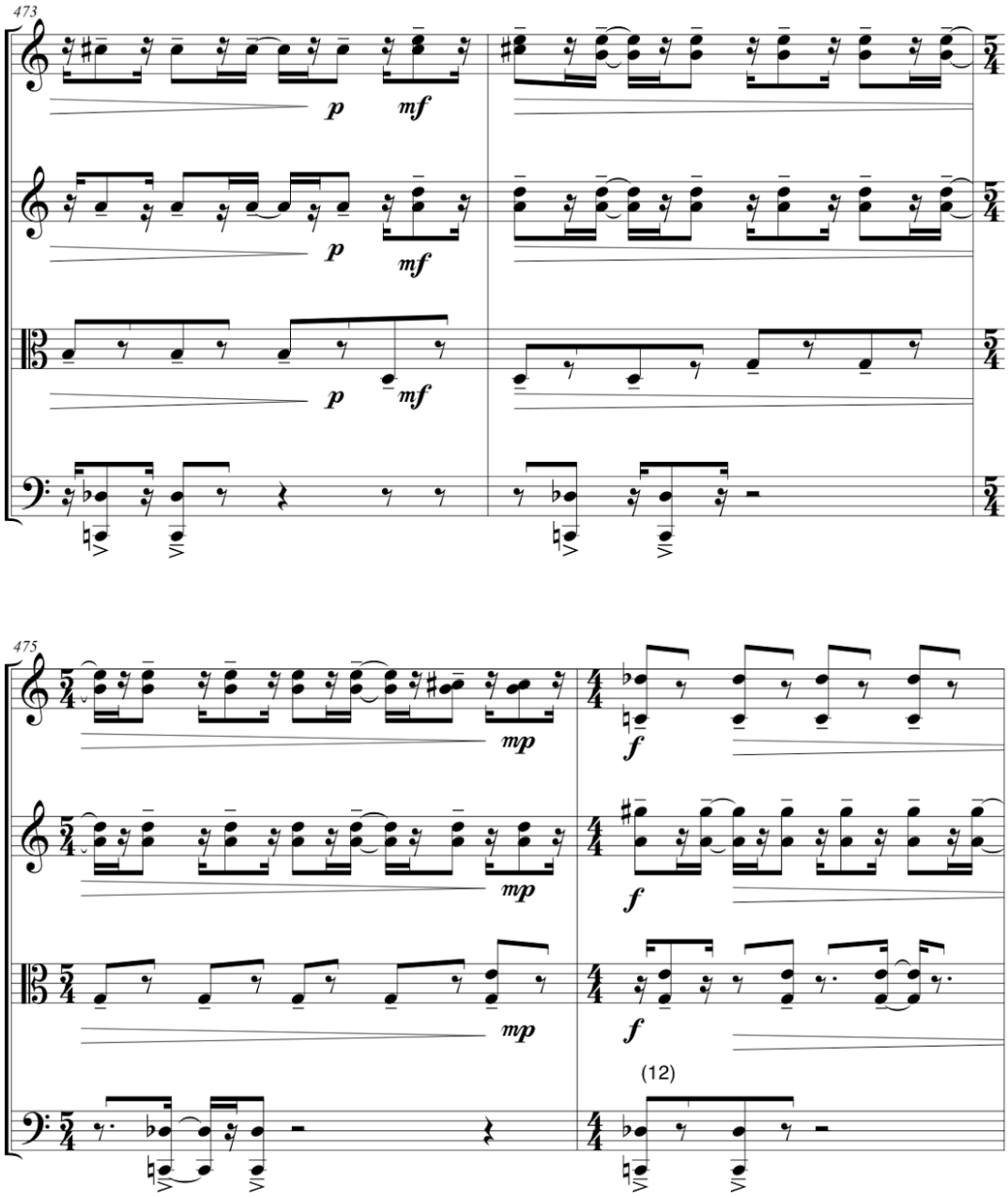

455
p
dim.
ppp
f
(7)
458
mf
dim.

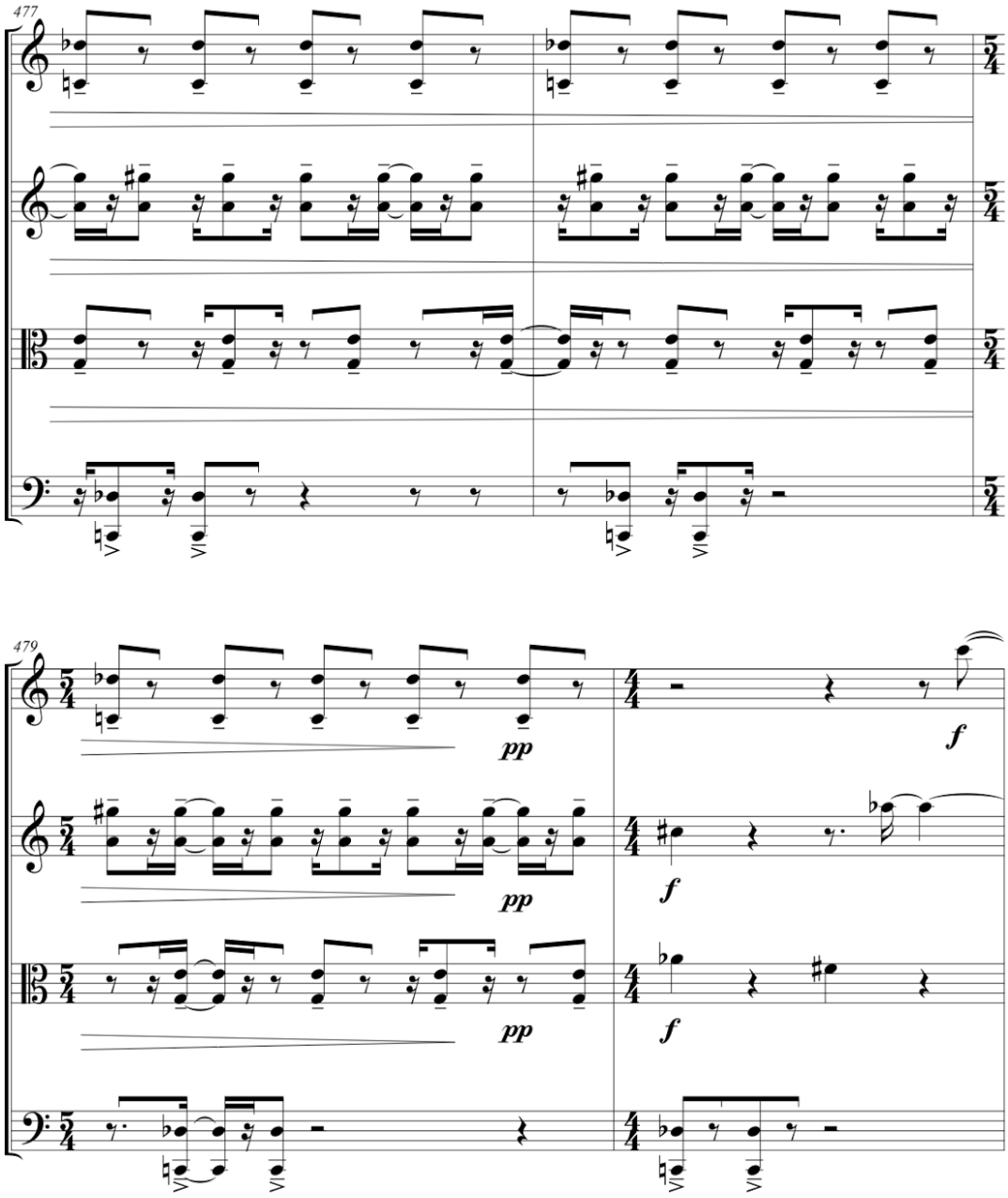

460
(8)

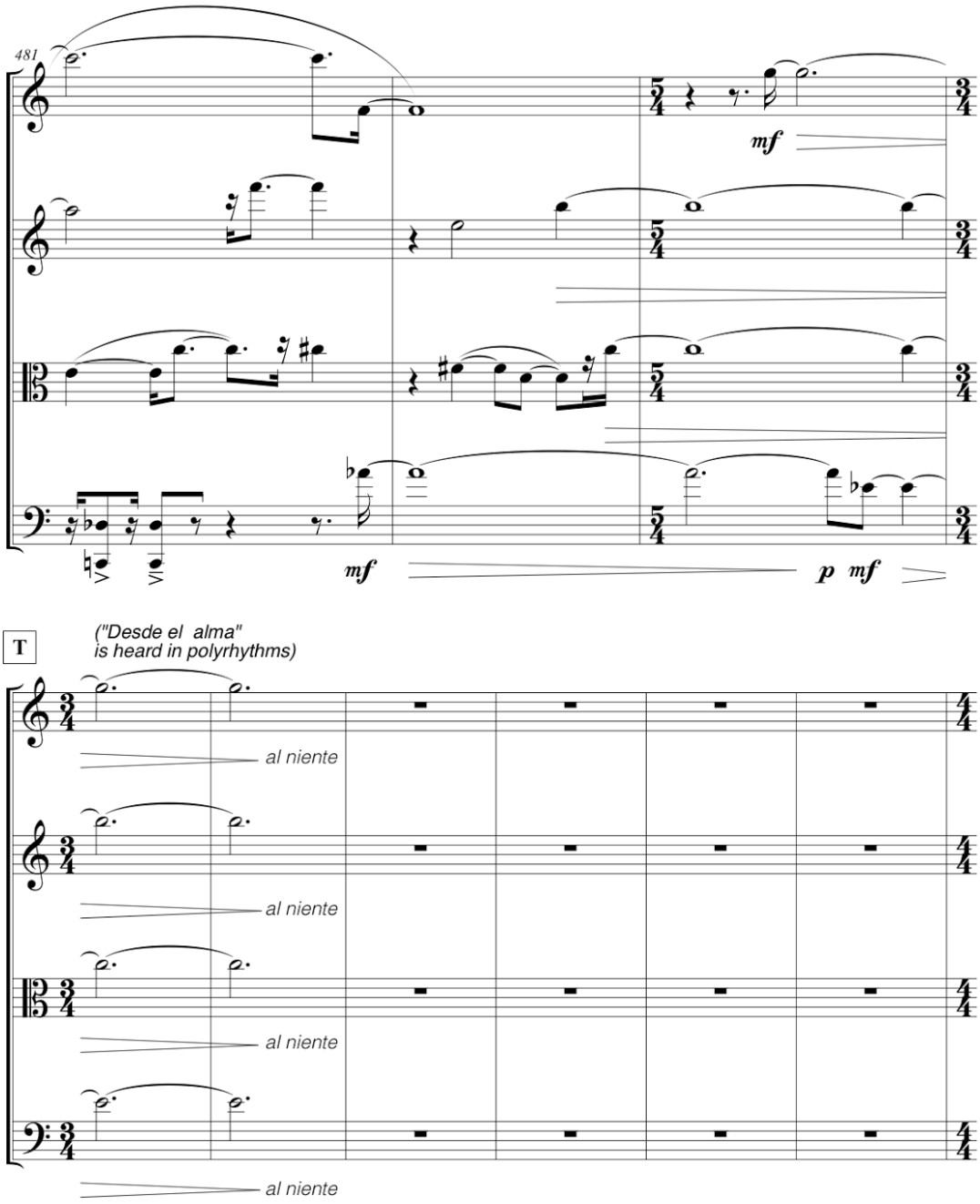

462
p
dim.
ppp
p
dim.
ppp
p
dim.
ppp

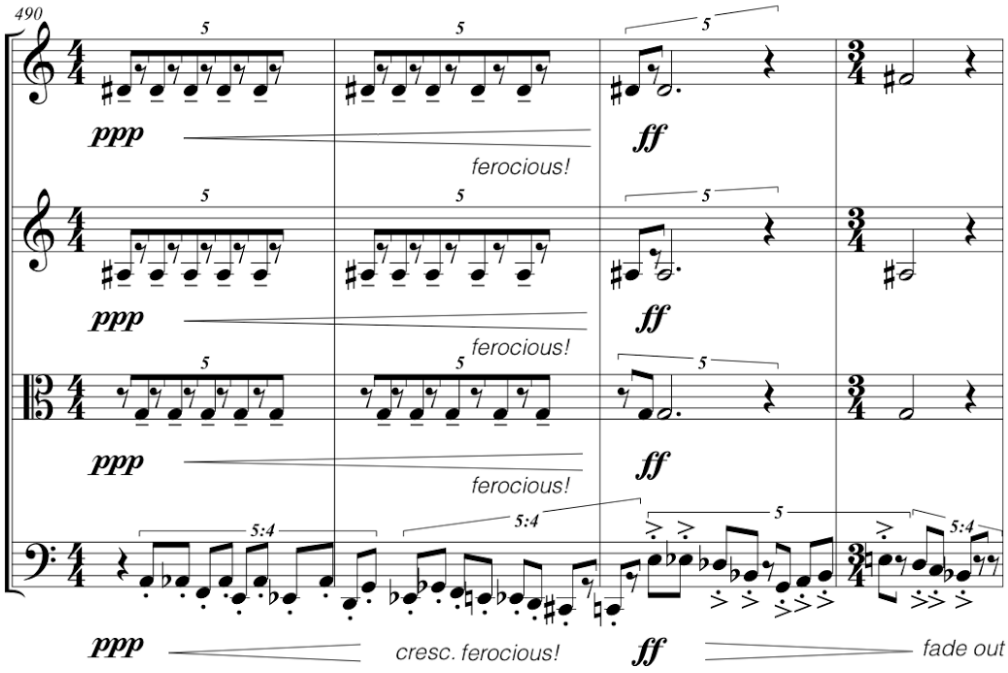

S
f
f
f
(9)
467
sfz
subito p
dim.
sfz
subito p
dim.
mf
dim.
(10)

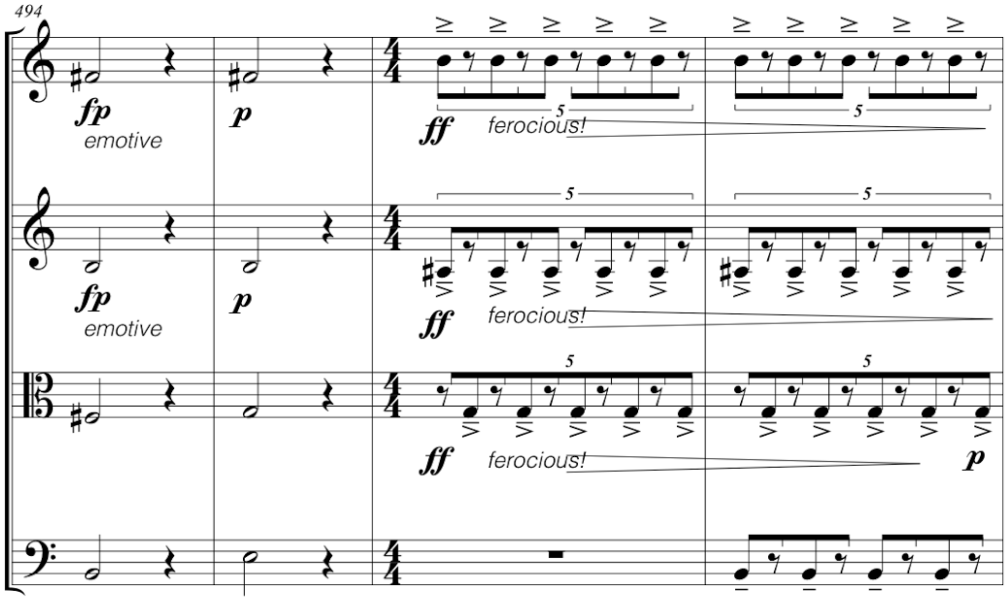

469
471
ppp
mp
ppp
mp
ppp
(11)

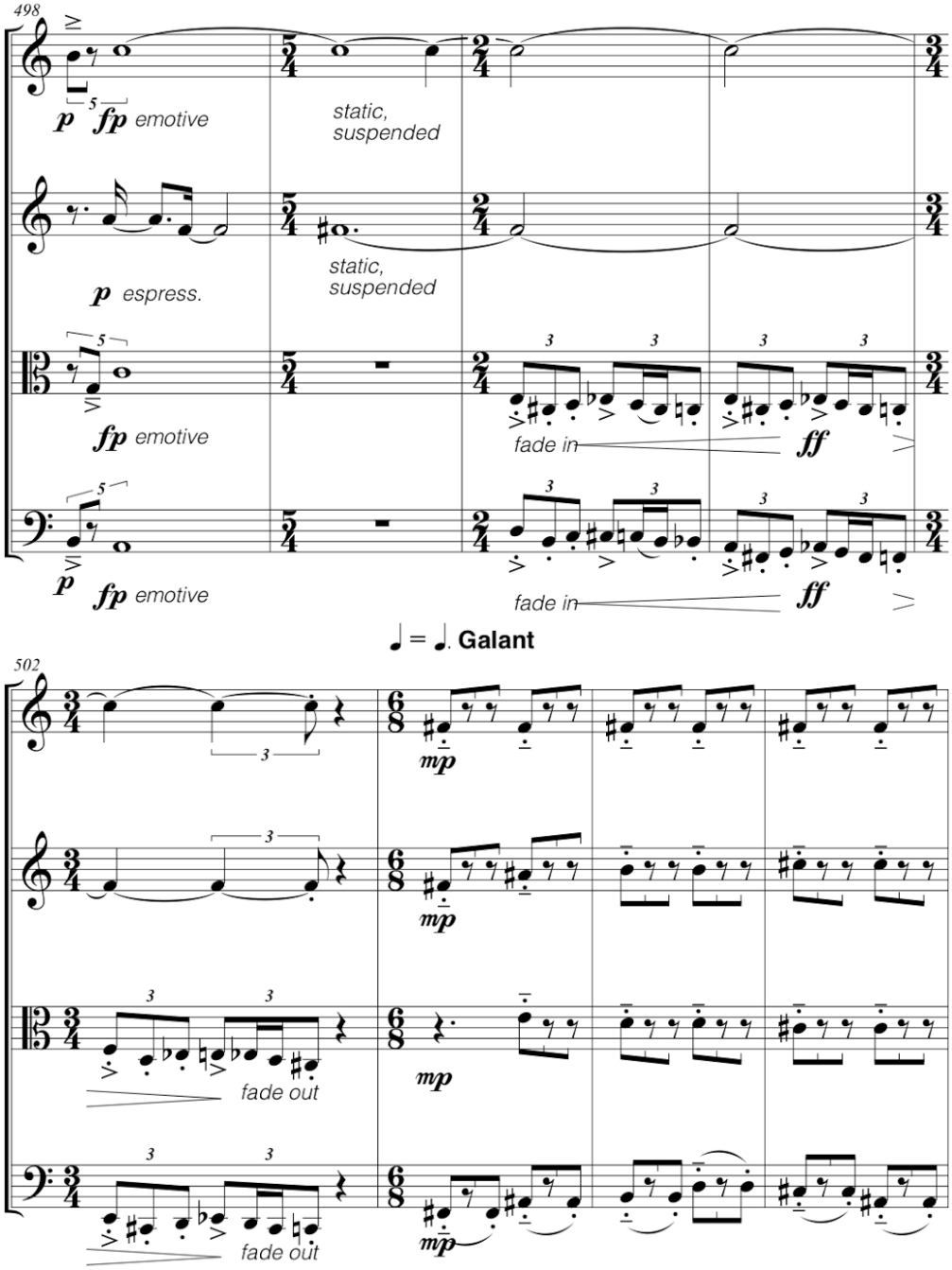

473
p
mf
475
mp
f
(12)

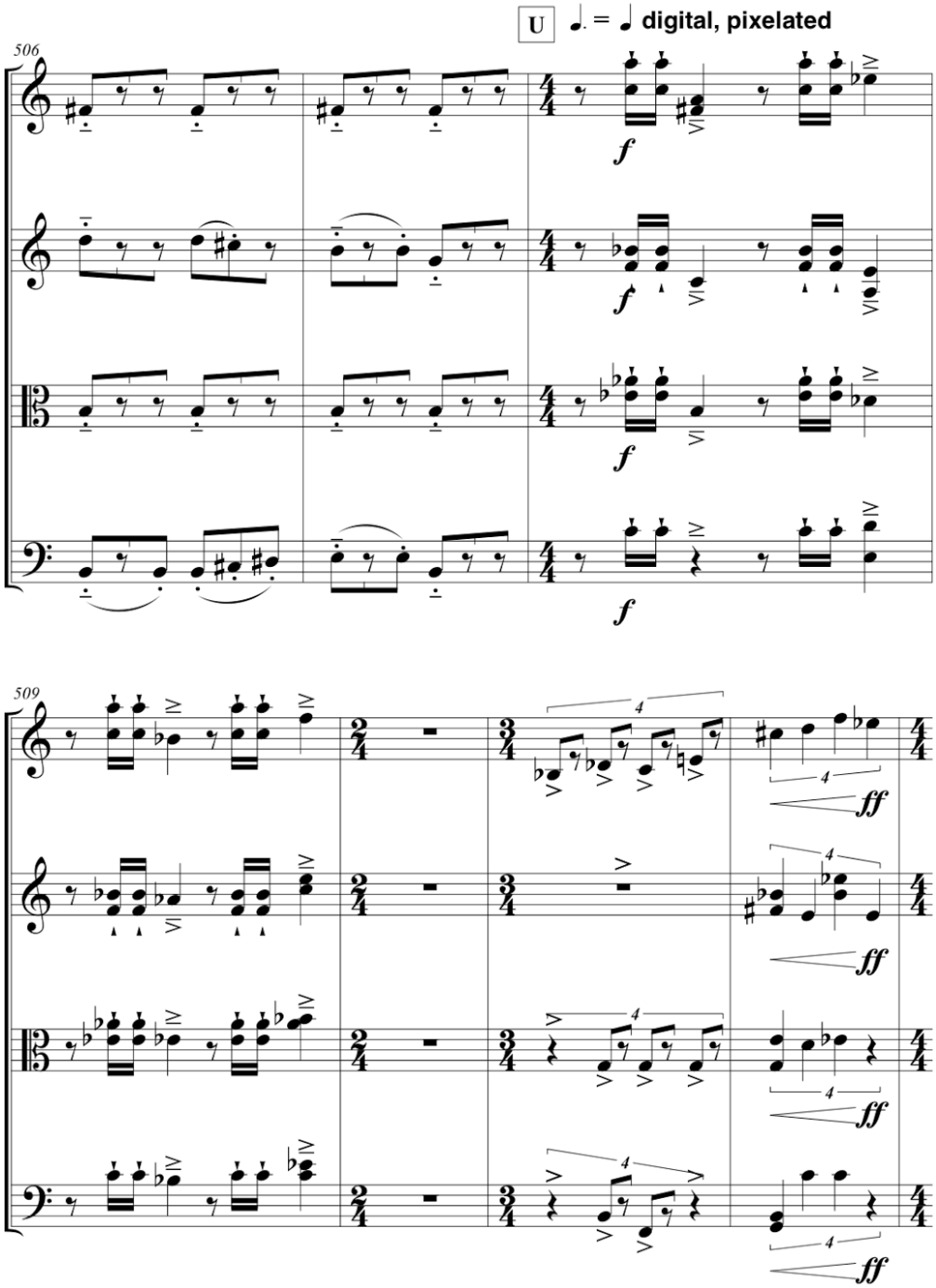

477
479
pp
pp
pp
f
f
f

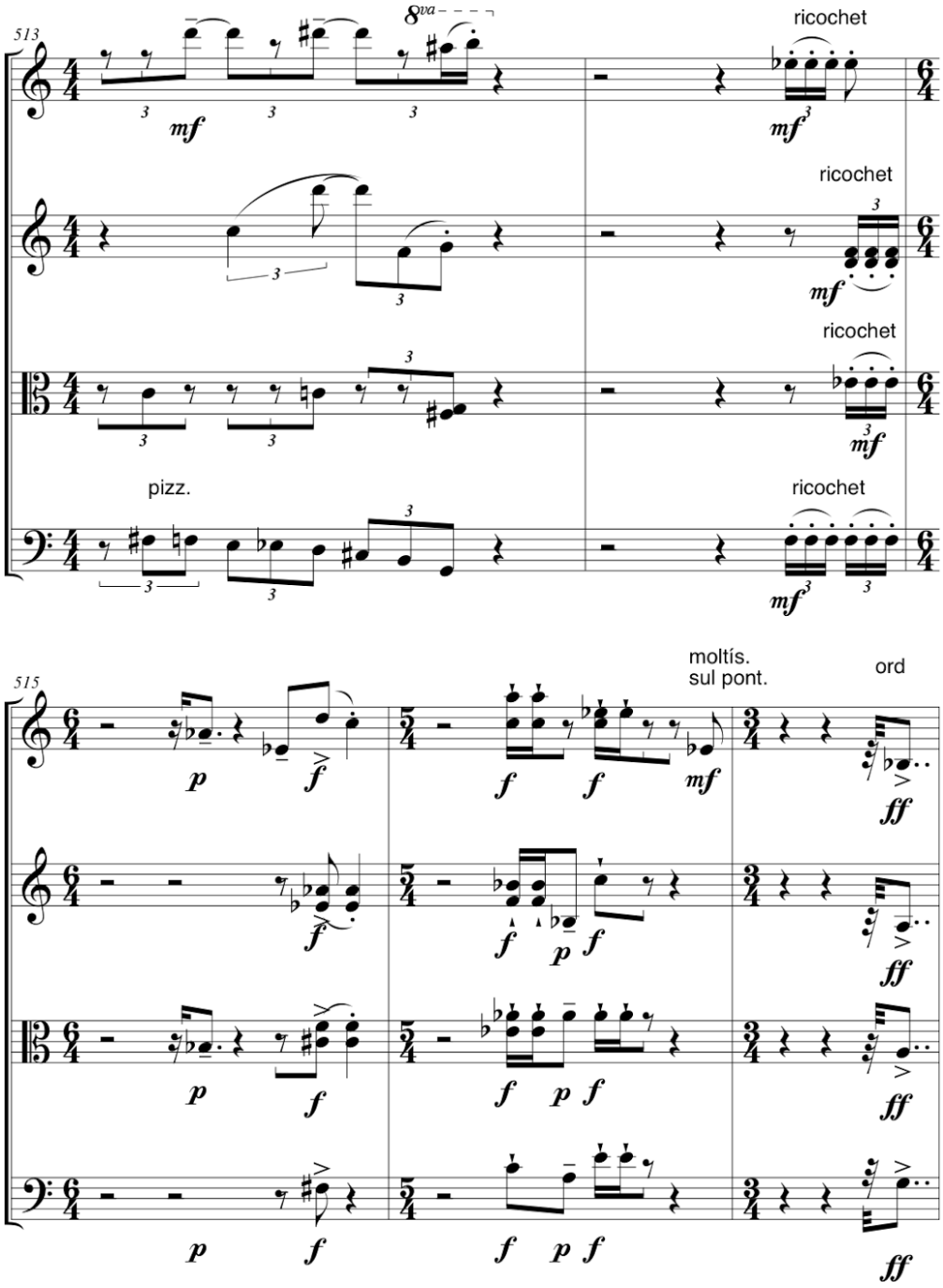

481
mf
mf
p mf
T
("Desde el alma"
is heard in polyrhythms)
al niente
al niente
al niente
al niente

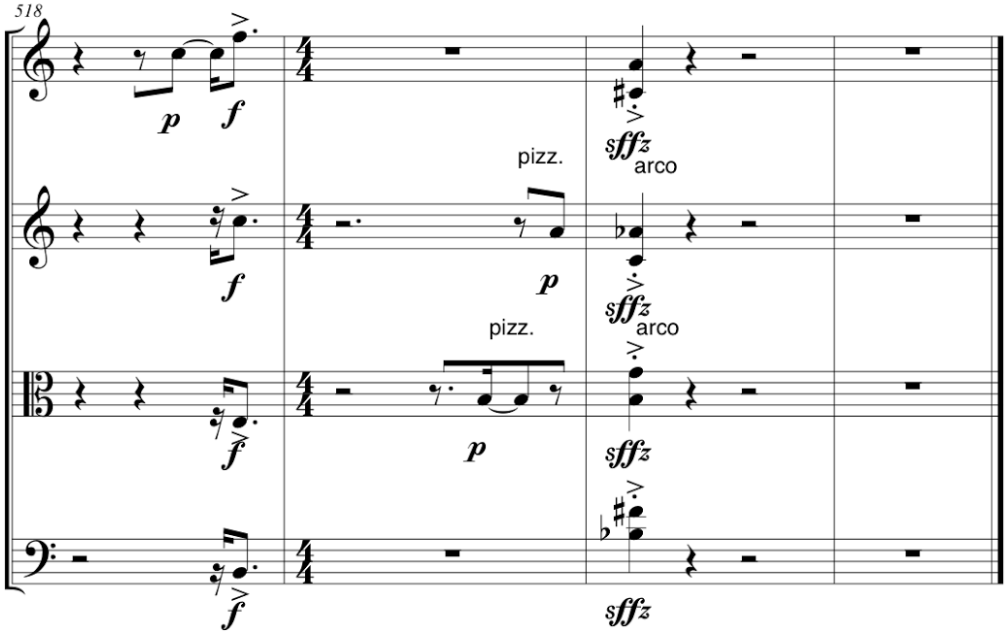

490
ppp
ferocious!
ff
5:4
cresc. ferocious!
fade out


494
fp
emotive
p
ff
ferocious!


498
p fp emotive
static, suspended
p espress.
static, suspended
fp emotive
fade in
ff
p fp emotive
fade in
ff
♩ = ♩. Galant
502
mp
mp
fade out
mp
fade out
mp


U
♩. = ♩ digital, pixelated
506
f
509
4
ff


513
8va
ricochet
mf
ricochet
mf
ricochet
mf
pizz.
ricochet
mf
515
moltís.
sul pont.
ord
p
f
ff


518
p
f
sffz
pizz.
arco
p
f
sffz
pizz.
arco
p
f
sffz
f
sffz